

Serial No.:10/584,996

Author Search

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:35:23 ON 27 DEC 2007

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FILE COVERS 1907 - 27 Dec 2007 VOL 147 ISS 26

FILE LAST UPDATED: 26 Dec 2007 (20071226/ED)

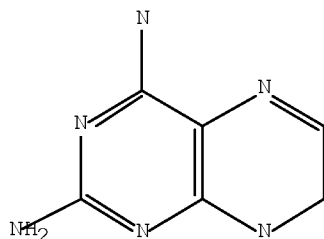
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

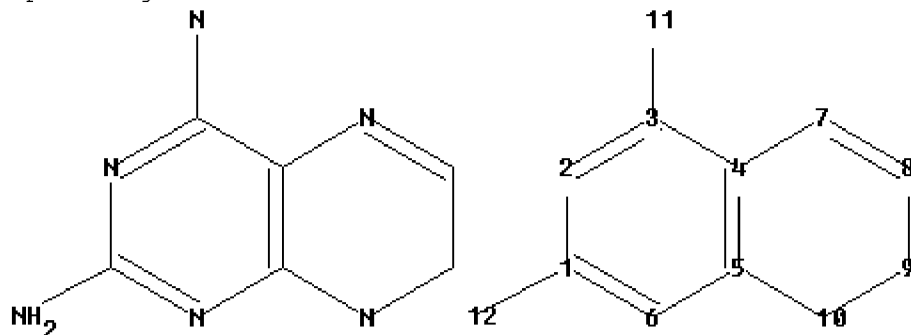
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> D QUE L41

L3 STR



Structure attributes must be viewed using STN Express query preparation:
Uploading strA.str



chain nodes :

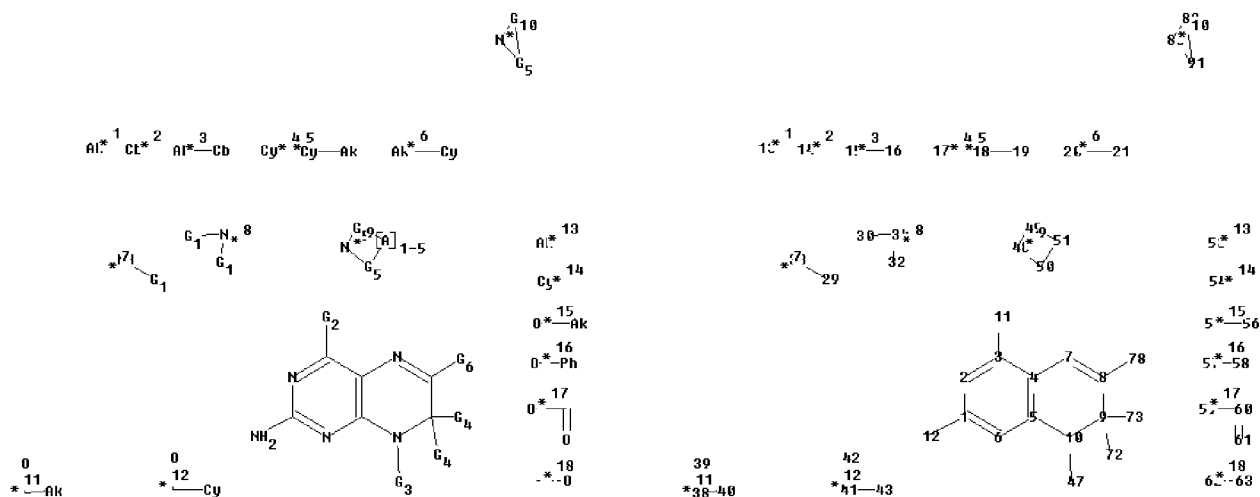
11 12
 ring nodes :
 1 2 3 4 5 6 7 8 9 10
 chain bonds :
 1-12 3-11
 ring bonds :
 1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10
 exact/norm bonds :
 1-12 3-11 4-7 5-10 7-8 8-9 9-10
 normalized bonds :
 1-2 1-6 2-3 3-4 4-5 5-6

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
 11:CLASS 12:CLASS

L5 3639 SEA FILE=REGISTRY SSS FUL L3
 L32 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation:
 Uploading strG.str



chain nodes :
 11 12 13 14 15 16 17 18 19 20 21 29 30 32 33 34 38 39 40 41 42
 43 47 53 54 55 56 57 58 59 60 61 62 63 72 73 78
 ring nodes :
 1 2 3 4 5 6 7 8 9 10 48 49 50 51 88 89 91
 chain bonds :
 1-12 3-11 8-78 9-72 9-73 10-47 15-16 18-19 20-21 29-33 30-34 32-34 38-39
 38-40 41-42 41-43 55-56 57-58 59-60 60-61 62-63
 ring bonds :

Serial No.:10/584,996

```

1-2  1-6  2-3  3-4  4-5  4-7  5-6  5-10  7-8  8-9  9-10  48-49  48-50  49-51  50-51
88-89 88-91 89-91
exact/norm bonds :
1-12  3-11  4-7  5-10  7-8  8-9  8-78  9-10  9-72  9-73  10-47  15-16  18-19  20-21
29-33  30-34  32-34  38-39  38-40  41-42  41-43  48-49  48-50  49-51  50-51  55-56
57-58  59-60
60-61  62-63  88-89  88-91  89-91
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6

```

G1:[*1],[*2],[*3],[*4],[*5],[*6]

G2:NH2,[*7],[*8],[*9],[*10]

G3:H,[*1],[*4],[*11],[*12]

G4:H,N,Cl,F,CF3,CN,[*4],[*13],[*14],[*15],[*16],[*17],[*18]

G5:C,O,S,N

G6:[*1],[*2],[*3],[*4],[*5],[*6],[*18]

Connectivity :

```

13:1 E exact RC ring/chain  14:1 E exact RC ring/chain  15:2 E exact RC ring/chain
16:1 E exact RC ring/chain  17:1 E exact RC ring/chain  18:2 E exact RC ring/chain
19:1 E exact
RC ring/chain  20:2 E exact RC ring/chain  21:1 E exact RC ring/chain  40:1 E exact
RC ring/chain
43:1 E exact RC ring/chain  53:1 E exact RC ring/chain  54:1 E exact RC ring/chain
56:1 E exact RC
ring/chain

```

Match level :

```

1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:CLASS 12:CLASS 13:CLASS 14:Atom 15:CLASS 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:Atom
29:CLASS 30:CLASS 32:CLASS 33:CLASS 34:CLASS 38:CLASS 39:CLASS 40:CLASS
41:CLASS 42:CLASS
43:Atom 47:CLASS 48:Atom 49:Atom 50:Atom 51:Atom 53:CLASS 54:Atom 55:CLASS
56:CLASS
57:CLASS 58:CLASS 59:CLASS 60:CLASS 61:CLASS 62:CLASS 63:CLASS 72:CLASS
73:CLASS 78:CLASS
88:Atom 89:Atom 91:Atom

```

Generic attributes :

```

17:
Saturation          : Unsaturated
18:
Saturation          : Unsaturated
21:
Saturation          : Unsaturated
54:
Saturation          : Unsaturated

```

Element Count :

Node 13: Limited
C,C1-5

Node 15: Limited
C,C1-5

Node 19: Limited
C,C1-5

Node 20: Limited
C,C1-5

Node 40: Limited
C,C1-5

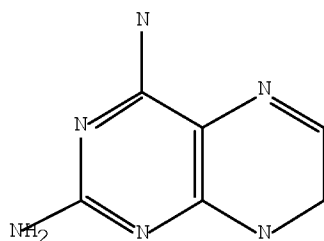
Node 53: Limited
C,C1-5

Node 56: Limited
C,C1-5

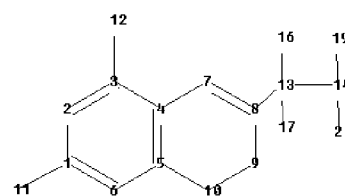
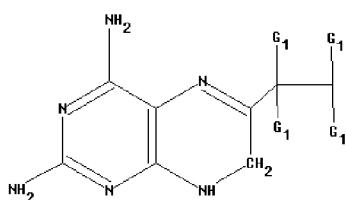
```
L34      184 SEA FILE=REGISTRY SUB=L5 SSS FUL L32
L36      252 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L34
L37      220 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND (PRY<=2003 OR
          AY<=2003 OR PY<=2003)
L38      4   SEA FILE=HCAPLUS ABB=ON  PLU=ON  DOBLHOFFER R?/AU
L39      56 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TEGTMEIER F?/AU
L40      57 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L38 OR L39)
L41      3   SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40 AND L37
```

=> D QUE L48

L3 STR



Structure attributes must be viewed using STN Express query preparation:
Uploading strH.str

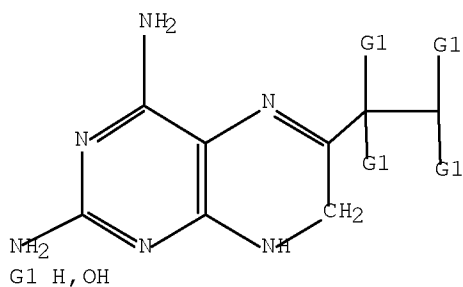


chain nodes :
 11 12 13 14 16 17 19 20
 ring nodes :
 1 2 3 4 5 6 7 8 9 10
 chain bonds :
 1-11 3-12 8-13 13-14 13-16 13-17 14-19 14-20
 ring bonds :
 1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10
 exact/norm bonds :
 1-11 3-12 4-7 5-10 7-8 8-9 9-10 13-16 13-17 14-19 14-20
 exact bonds :
 8-13 13-14
 normalized bonds :
 1-2 1-6 2-3 3-4 4-5 5-6

G1:H,OH

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
 11:CLASS 12:CLASS 13:CLASS 14:CLASS 16:CLASS 17:CLASS 19:CLASS 20:CLASS

L5 3639 SEA FILE=REGISTRY SSS FUL L3
 L38 4 SEA FILE=HCAPLUS ABB=ON PLU=ON DOBLHOFFER R?/AU
 L39 56 SEA FILE=HCAPLUS ABB=ON PLU=ON TEGTMEIER F?/AU
 L40 57 SEA FILE=HCAPLUS ABB=ON PLU=ON (L38 OR L39)
 L42 STR



Structure attributes must be viewed using STN Express query preparation.

```
L45      7 SEA FILE=REGISTRY SUB=L5 SSS FUL L42
L46      9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L45
L47      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L46 AND (PRY<=2003 OR
          AY<=2003 OR PY<=2003)
L48      2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40 AND L47
```

=> FILE WPIX

FILE 'WPIX' ENTERED AT 15:35:46 ON 27 DEC 2007

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FILE LAST UPDATED: 21 DEC 2007 <20071221/UP>

MOST RECENT THOMSON SCIENTIFIC UPDATE: 200782 <200782/DW>

DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> IPC Reform backfile reclassification has been loaded to September 6th 2007. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC and 20061231/UPIC, 20070601/UPIC and 20071001/UPIC. <<<

FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:

http://www.stn-international.de/training_center/patents/stn_guide.pdf

FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE

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http://www.stn-international.com/archive/presentations/DWPIAnaVist2_0710.pdf

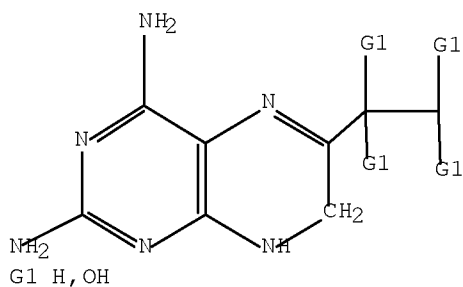
>>> XML document distribution format now available.

See HELP XMLDOC <<<

'BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> D QUE L52

```
L38      4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  DOBLHOFER R?/AU
L39     56 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TEGTMEIER F?/AU
L40     57 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L38 OR L39)
L42      STR
```



Structure attributes must be viewed using STN Express query preparation.

```
L50          1 SEA FILE=WPIX SSS FUL L42
L51          2 SEA FILE=WPIX ABB=ON  PLU=ON  L50/DCR
L52          0 SEA FILE=WPIX ABB=ON  PLU=ON  L40 AND L51
```

=> DUP REM L52 L41 L48

L52 HAS NO ANSWERS

FILE 'HCAPLUS' ENTERED AT 15:36:00 ON 27 DEC 2007

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FILE COVERS 1907 - 27 Dec 2007 VOL 147 ISS 26

FILE LAST UPDATED: 26 Dec 2007 (20071226/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

PROCESSING COMPLETED FOR L52

PROCESSING COMPLETED FOR L41

PROCESSING COMPLETED FOR L48

L58 3 DUP REM L52 L41 L48 (2 DUPLICATES REMOVED)

ANSWERS '1-3' FROM FILE HCAPLUS

=> D IBIB ED ABS HITSTR L58 1-3

L58 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2005:371070 HCAPLUS Full-text

DOCUMENT NUMBER: 142:404279

TITLE: Use of pteridine derivatives for the treatment of increased intracranial pressure and secondary ischemia

Serial No.:10/584,996

INVENTOR(S): Doblhofer, Robert; Tegtmeier, Frank
 PATENT ASSIGNEE(S): Vasopharm Biotech GmbH, Germany
 SOURCE: PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037286	A1	20050428	WO 2003-EP3096	20030325 <--
W: US				
CA 2519919	A1	20041007	CA 2003-2519919	20031008 <--
WO 2004084906	A1	20041007	WO 2003-EP11138	20031008 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003293607	A1	20041018	AU 2003-293607	20031008 <--
EP 1605947	A1	20051221	EP 2003-788945	20031008 <--
EP 1605947	B1	20060802		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1758913	A	20060412	CN 2003-80110211	20031008 <--
JP 2006514965	T	20060518	JP 2004-569858	20031008 <--
AT 334681	T	20060815	AT 2003-788945	20031008 <--
ES 2270151	T3	20070401	ES 2003-3788945	20031008 <--
MX 2005PA09491	A	20060222	MX 2005-PA9491	20050906 <--
US 2007032498	A1	20070208	US 2006-549200	20060703 <--
PRIORITY APPLN. INFO.:			WO 2003-EP3096	A 20030325 <--
			WO 2003-EP11138	W 20031008 <--

OTHER SOURCE(S): MARPAT 142:404279

ED Entered STN: 29 Apr 2005

AB The invention discloses the use of pteridine derivs. for treating increased intracranial pressure and/or secondary ischemia. Compound preparation is included.

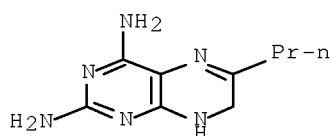
IT 50691-64-0 767288-02-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

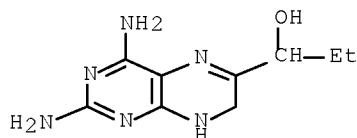
(pteridine derivs. for treatment of increased intracranial pressure and secondary ischemia)

RN 50691-64-0 HCAPLUS

CN 2,4-Pteridinediamine, 1,7-dihydro-6-propyl- (9CI) (CA INDEX NAME)



RN 767288-02-8 HCAPLUS

CN 6-Pteridinemethanol, 2,4-diamino- α -ethyl-1,7-dihydro- (9CI) (CA INDEX NAME)

IT 13535-20-1F

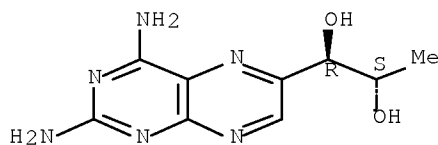
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(pteridine derivs. for treatment of increased intracranial pressure and secondary ischemia)

RN 13535-20-1 HCAPLUS

CN 1,2-Propanediol, 1-(2,4-diamino-6-pteridiny1)-, (1R,2S)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2004:817714 HCAPLUS Full-text

DOCUMENT NUMBER: 141:307610

TITLE: Use of pteridine derivatives for the treatment of increased intracranial pressure, secondary ischemia, and disorders associated with an increased level of cytotoxic reactive oxygen species

INVENTOR(S): Doblhofer, Robert; Tegtmeyer, Frank

PATENT ASSIGNEE(S): Vasopharm Biotech G.m.b.H., Germany

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

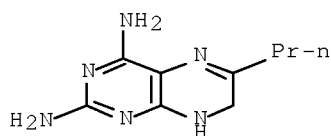
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

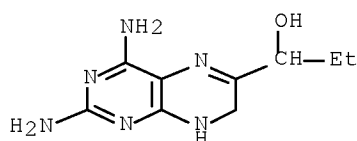
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004084906	A1	20041007	WO 2003-EP11138	20031008 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,				

Serial No.:10/584,996

LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
 OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
 TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 WO 2005037286 A1 20050428 WO 2003-EP3096 20030325 <--
 W: US
 CA 2519919 A1 20041007 CA 2003-2519919 20031008 <--
 AU 2003293607 A1 20041018 AU 2003-293607 20031008 <--
 EP 1605947 A1 20051221 EP 2003-788945 20031008 <--
 EP 1605947 B1 20060802
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 JP 2006514965 T 20060518 JP 2004-569858 20031008 <--
 MX 2005PA09491 A 20060222 MX 2005-PA9491 20050906 <--
 US 2007032498 A1 20070208 US 2006-549200 20060703 <--
 PRIORITY APPLN. INFO.: WO 2003-EP3096 A 20030325 <--
 WO 2003-EP11138 W 20031008 <--
 OTHER SOURCE(S): MARPAT 141:307610
 ED Entered STN: 07 Oct 2004
 AB The present invention relates to the use of pteridine derivs. for the
 treatment of increased intracranial pressure, secondary ischemia, and
 disorders associated with an increased level of cytotoxic reactive oxygen
 species. H4-aminobiopterin (preparation given) caused a clear concentration
 dependent contraction of both rat basilar arteries and middle cerebral
 arteries.
 IT 50691-64-0 767288-02-8
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (pteridine derivs. for treatment of increased intracranial pressure,
 secondary ischemia, and disorders associated with increased levels of
 cytotoxic reactive oxygen species)
 RN 50691-64-0 HCAPLUS
 CN 2,4-Pteridinediamine, 1,7-dihydro-6-propyl- (9CI) (CA INDEX NAME)



RN 767288-02-8 HCAPLUS
 CN 6-Pteridinemethanol, 2,4-diamino- α -ethyl-1,7-dihydro- (9CI) (CA INDEX NAME)



IT 13535-20-1P

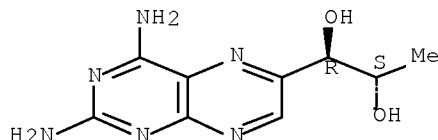
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(pteridine derivs. for treatment of increased intracranial pressure, secondary ischemia, and disorders associated with increased levels of cytotoxic reactive oxygen species)

RN 13535-20-1 HCAPLUS

CN 1,2-Propanediol, 1-(2,4-diamino-6-pteridiny)-, (1R,2S)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:612291 HCAPLUS Full-text

DOCUMENT NUMBER: 143:153229

TITLE: Preparation of pharmaceutical compositions containing 4-amino-7,8-dihydropteridines and their use for the treatment of diseases which are caused by an increased nitric oxide level

INVENTOR(S): Doblhofer, Robert; Tegtmeyer, Frank

PATENT ASSIGNEE(S): Vasopharm Biotech G.m.b.H., Germany

SOURCE: PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

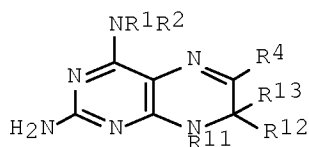
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

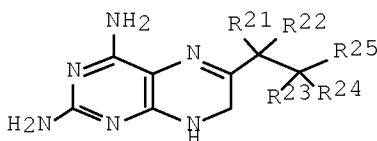
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005063752	A1	20050714	WO 2003-EP14970	20031230 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
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AU 2003290127	A1	20050721	AU 2003-290127	20031230 <--
EP 1699793	A1	20060913	EP 2003-782489	20031230 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK			
JP 2007525407	T	20070906	JP 2005-512684	20031230 <--

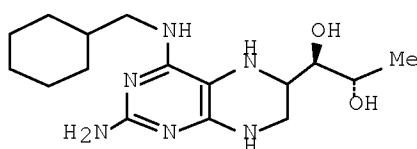
IN 2006DN03444 A 20070831 IN 2006-DN3444 20060615 <--
 PRIORITY APPLN. INFO.: WO 2003-EP14970 W 20031230 <--
 OTHER SOURCE(S): MARPAT 143:153229
 ED Entered STN: 15 Jul 2005
 GI



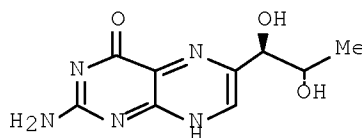
I



II



III



IV

AB The present invention relates to the area of NO synthase inhibition and, more particularly, relates to novel 4-amino-7,8-dihydropteridines, e.g., I [R1, R2 = H, C1-20-alkyl, C1-20-alkenyl, C1-20-alkynyl, C3-8-cycloalkyl, cycloalkenyl, (cycloalkyl)alkyl, aryl, (C1-3-alkyl)aryl, etc.; NR1R2 = 3- to 8-membered ring (optionally containing 1 or 2 other heteroatoms - O, S, N); R4 = C1-20-alkyl, C1-20-alkenyl, C1-20-alkynyl, C3-8-cycloalkyl, cycloalkenyl, (cycloalkyl)alkyl, aryl, (C1-3-alkyl)aryl, etc.; R6, R7 = F, Cl, I, Br, O-(C1-10-alkyl), OPh, OC(:O)(C1-10-alkyl), OC(:O)aryl, NR8R9, oxo, Ph, C(:O)(C1-5-alkyl), CF3, CN, CONR8R9, CO2H, C(:O)O-(C1-5-alkyl), C(:O)O-aryl, S(O)n-(C1-5-alkyl), SO2NR8R9; R8 = H, C1-20-alkyl; R9 = H, C1-20-alkyl, aryl (preferably Ph); R11 = H, C1-20-alkyl, aryl, CO-alkyl, CO-aryl; R12, R13 = H, C1-10-alkyl, aryl, O-(C1-10-alkyl), OPh, OC(:O)-C1-10-alkyl, OC(:O)-aryl, NR8R9, Ph, C(:O)-C1-10-alkyl, CF3, CN, CONR8R9, CO2H, etc.; aryl = (un)substituted Ph, naphthyl, heteroaryl; heteroaryl = 5- to 7-membered ring (optionally containing an addnl. heteroatom - O, N, S); n = 0 - 2], or their pharmaceutically acceptable acid addition salts, hydrates and esters, pharmaceutical compns. containing said compds., and the use of said compds. in the treatment of a disorder characterized by a disturbed nitric oxide level. The patent particularly excludes compds. II [R21, R22, R23, R24 = ; R25 = H, Me, CH2OH, CHO, (un)branched C1-9-alkyl, (CHOH)nY, (CHOH)n(CH2)mW; Y = H, C1-9-alkyl; W = H, OH; n, m = 1 - 20]. Thus, 4-[(Cyclohexylmethyl)amino]-5,6,7,8-tetrahydrobiopterin (III) was prepared from biopterin (IV) via acetylation with Ac2O in pyridine, reaction with PhCH2CH2OH in dioxane containing Ph3P, amination with (cyclohexylmethyl)amine in dioxane, and hydrogenation in CF2CO4H containing catalytic PtO2. The in vivo stability [t1/2 = << 5 min. (tetrahydro); t1/2 = 48 min. (dihydro)] and NO release inhibitor activity for I was determined

IT 858127-61-4F, N4-[(Cyclohexylmethyl)amino]-4-desoxy-L-biopterin
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and hydrogenation of; preparation of pharmaceutical compns.)

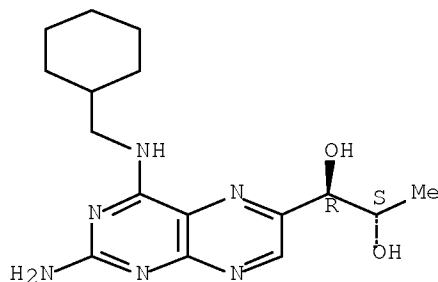
containing

4-amino-7,8-dihydropteridines and their use for the treatment of diseases which are caused by an increased nitric oxide level)

RN 858127-61-4 HCAPLUS

CN 1,2-Propanediol, 1-[2-amino-4-[(cyclohexylmethyl)amino]-6-pteridinyl]-, (1R,2S)- (CA INDEX NAME)

Absolute stereochemistry.



IT 858127-54-5P, 2,4-Diamino-8-methyl-6-phenyl-7,8-dihydropteridine

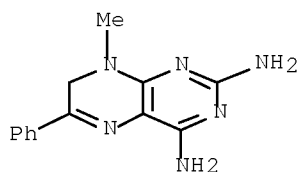
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pharmaceutical compns. containing 4-amino-7,8-dihydropteridines

and their use for the treatment of diseases which are caused by an increased nitric oxide level)

RN 858127-54-5 HCAPLUS

CN 2,4-Pteridinediamine, 7,8-dihydro-8-methyl-6-phenyl- (CA INDEX NAME)



REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

Structure Search

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:36:21 ON 27 DEC 2007

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FILE COVERS 1907 - 27 Dec 2007 VOL 147 ISS 26

FILE LAST UPDATED: 26 Dec 2007 (20071226/ED)

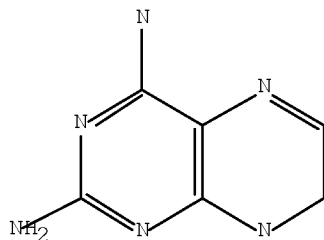
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> D QUE L47

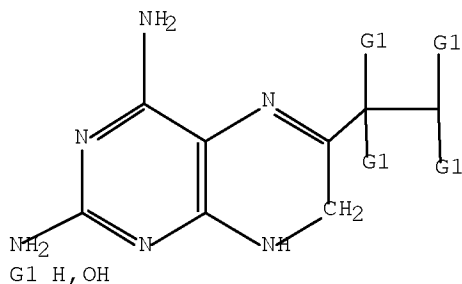
L3 STR



Structure attributes must be viewed using STN Express query preparation.

L5 3639 SEA FILE=REGISTRY SSS FUL L3

L42 STR



Structure attributes must be viewed using STN Express query preparation.

L45 7 SEA FILE=REGISTRY SUB=L5 SSS FUL L42
L46 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L45
L47 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (PRY<=2003 OR
AY<=2003 OR PY<=2003)

=> S L47 NOT L41,L48
L59 5 L47 NOT (L41 OR L48)

=> FILE WPIX
FILE 'WPIX' ENTERED AT 15:36:48 ON 27 DEC 2007
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FILE LAST UPDATED: 21 DEC 2007 <20071221/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE: 200782 <200782/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> IPC Reform backfile reclassification has been loaded to September 6th
2007. No update date (UP) has been created for the reclassified
documents, but they can be identified by 20060101/UPIC and
20061231/UPIC, 20070601/UPIC and 20071001/UPIC. <<<

FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf

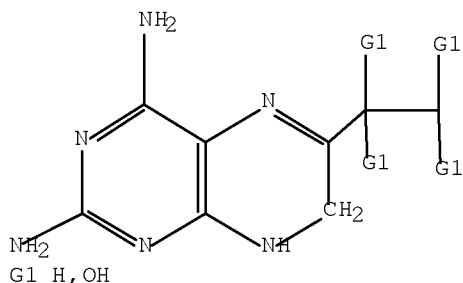
FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

EXPLORE DERWENT WORLD PATENTS INDEX IN STN ANAVIST, VERSION 2.0:
http://www.stn-international.com/archive/presentations/DWPIAnaVist2_0710.pdf

>>> XML document distribution format now available.
See HELP XMLDOC <<<

'BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> D QUE L51
L42 STR



Structure attributes must be viewed using STN Express query preparation.
L50 1 SEA FILE=WPIX SSS FUL L42

L51 2 SEA FILE=WPIX ABB=ON PLU=ON L50/DCR

=> S L51 NOT L52
L60 2 L51 NOT L52

=> FILE BEILSTEIN

FILE 'BEILSTEIN' ENTERED AT 15:37:07 ON 27 DEC 2007

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FILE LAST UPDATED ON September 26, 2007

FILE COVERS 1771 TO 2007.

*** FILE CONTAINS 10.119,480 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in
separate documents and can not be searched together in one query.
Reaction data for BEILSTEIN compounds may be displayed
immediately with the display codes PRE (preparations) and REA
(reactions). A substance answer set retrieved after the search
for a chemical name, a compounds with available reaction
information by combining with PRE/FA, REA/FA or more generally
with RX/FA. The BEILSTEIN Registry Number (BRN) is the link
between a BEILSTEIN compound and belonging reactions. For mo
detailed reaction searches BRNs can be searched as reaction
partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

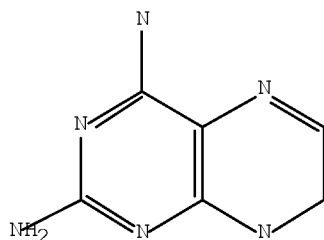
>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

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* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
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>>> Price change as of January 1st, 2008: Connect Time and Structure
Search fees re-introduced. See NEWS and HELP COST <<<

=> D QUE L53

L3 STR

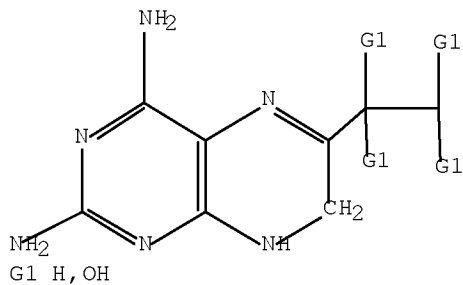


Structure attributes must be viewed using STN Express query preparation.

L5 3639 SEA FILE=REGISTRY SSS FUL L3

L42

STR



Structure attributes must be viewed using STN Express query preparation.

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 L53 3 SEA FILE=BEILSTEIN ABB=ON PLU=ON L45

=> FILE MARPAT

FILE 'MARPAT' ENTERED AT 15:37:14 ON 27 DEC 2007

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FILE CONTENT: 1961-PRESENT VOL 147 ISS 26 (20071221/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES
 (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 2007270387 22 NOV 2007
 DE 102007020009 31 OCT 2007
 EP 1849853 31 OCT 2007
 JP 2007294323 08 NOV 2007
 WO 2007129745 15 NOV 2007
 GB 2437429 24 OCT 2007
 FR 2900574 09 NOV 2007
 RU 2309952 10 NOV 2007
 CA 2584745 13 OCT 2007

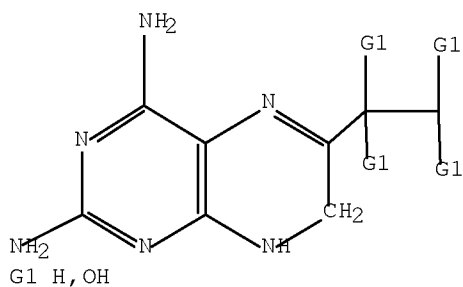
Expanded G-group definition display now available.

Effective December 15th the iteration and answer limits in MARPAT have increased from 100,000 to 200,000 for both on-line and batch searches. For more information on MARPAT search limits, type HELP SLIMITS at an arrow prompt.

=> D QUE L57

L42

STR



Structure attributes must be viewed using STN Express query preparation.

L56 13 SEA FILE=MARPAT SSS FUL L42
L57 13 SEA FILE=MARPAT ABB=ON PLU=ON L56/COM

=> DUP REM L59 L60 L53 L57
DUPLICATE IS NOT AVAILABLE IN 'BEILSTEIN'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
FILE 'HCAPLUS' ENTERED AT 15:37:44 ON 27 DEC 2007
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PROCESSING COMPLETED FOR L59
PROCESSING COMPLETED FOR L60
PROCESSING COMPLETED FOR L53
PROCESSING COMPLETED FOR L57

L61 20 DUP REM L59 L60 L53 L57 (3 DUPLICATES REMOVED)
ANSWERS '1-5' FROM FILE HCAPLUS
ANSWER '6' FROM FILE WPIX
ANSWERS '7-9' FROM FILE BEILSTEIN
ANSWERS '10-20' FROM FILE MARPAT

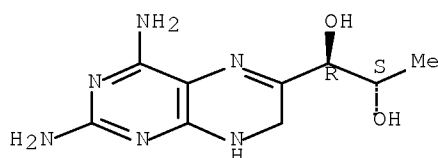
=> D IBIB ED ABS HITSTR L61 1-5; D IBIB AB HITSTR L61 6; D IDE ALLREF 7-9; D IBIB
AB QHIT L61 10-20

L61 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 1999:236988 HCAPLUS Full-text
DOCUMENT NUMBER: 130:276776
TITLE: Pteridine derivatives as NO synthase inhibitors
INVENTOR(S): Werner, Ernst; Schircks, Bernhard
PATENT ASSIGNEE(S): Austria
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 906913	A1	19990407	EP 1997-117276	19971006 <--
EP 906913	B1	20010523		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRIORITY APPLN. INFO.:			EP 1997-117276	19971006 <--
OTHER SOURCE(S): MARPAT 130:276776				
ED Entered STN: 19 Apr 1999				
AB Pteridine derivs. such as dihydroaminobiopterin are useful as NO synthase inhibitors. Thus, 2,4-diamino-6-(L-erythro-1,2-dihydroxypropyl)pteridine was reduced with Na2S2O4 to give the 7,8-dihydro compound. The effectiveness of the compound in inhibiting the enzyme was demonstrated.				
IT 222420-39-5P				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)				
(pteridine derivs. as NO synthase inhibitors)				
RN 222420-39-5 HCAPLUS				
CN 1,2-Propanediol, 1-(2,4-diamino-1,7-dihydro-6-pteridiny1)-, (1R,2S)- (9CI)				
(CA INDEX NAME)				

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1988:112955 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 108:112955
 TITLE: Preparation of diastereomers of 10-alkyl-10-deazaminopterins as neoplasm inhibitors
 INVENTOR(S): DeGraw, Joseph I.; Christie, Pamela H.; Sirotnak, Francis M.
 PATENT ASSIGNEE(S): SRI International, USA; Memorial Sloan Kettering Cancer Center
 SOURCE: PCT Int. Appl., 26 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8704161	A1	19870716	WO 1986-US2513	19861124 <--

Serial No.:10/584,996

W: DE, GB, JP

RW: FR

US 4746659	A	19880524	US 1985-814720	19851230 <--
DE 3690639	T0	19871119	DE 1986-3690639	19861124 <--
GB 2192888	A	19880127	GB 1987-18482	19861124 <--
GB 2192888	B	19891018		
EP 254726	A1	19880203	EP 1986-907213	19861124 <--
R: FR				
JP 63502892	T	19881027	JP 1986-506186	19861124 <--
JP 08009619	B	19960131		

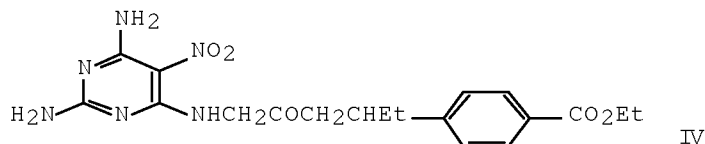
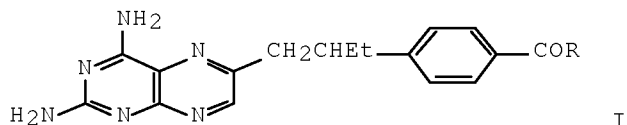
PRIORITY APPLN. INFO.:

US 1985-814720	A	19851230 <--
WO 1986-US2513	W	19861124 <--

OTHER SOURCE(S): CASREACT 108:112955; MARPAT 108:112955

ED Entered STN: 01 Apr 1988

GI



AB The title compds. I [R = NHCH(CO₂H)CH₂CH₂CO₂H; 1 of R₁, R₂ = C₁-8 alkyl and the other = H, C₁-8 alkyl; R₁ ≠ R₂] were prepared as neoplasm inhibitors in a 14-step synthesis. 4-PrC₆H₄CO₂H was added to LDA in THF followed by H₂C:CHCH₂Br to give, after esterification, 63% 4-(MeO₂C)C₆H₄CH₂CH:CH₂ which was stirred 30 min with NaIO₄ and RuO₂ to give 77% 4-(MeO₂C)C₆H₄CH₂CO₂H. Resolution with (+)-PhCHMeNH₂ was accomplished at this stage. (Pyrimidinylamino)hexanone IV (produced in 7 addnl. steps) was stirred at 90-100° in AcOH containing Zn dust to give 83% I (R = Et). D,L-10-Ethyl-10-deazaminopterin (II), at 12 mg/kg i.p., increased survival time of mice inoculated with L1210 cells by 200% over controls. Tablets were prepared each containing II 15, lactose 86, starch 45.5, gelatin 2.5, and Mg stearate 1.0 mg.

IT 102153-04-8P 102153-05-9P

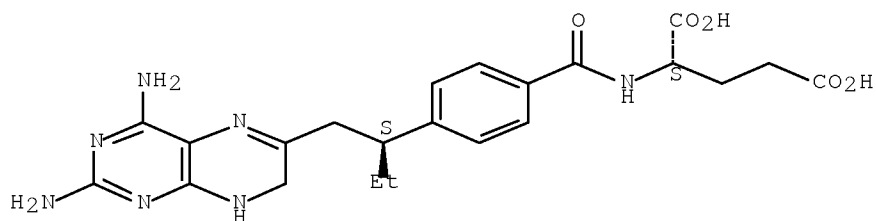
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as neoplasm inhibitor)

RN 102153-04-8 HCAPLUS

CN L-Glutamic acid, N-[4-[1-[(2,4-diamino-1,7-dihydro-6-pteridinyl)methyl]propyl]benzoyl]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

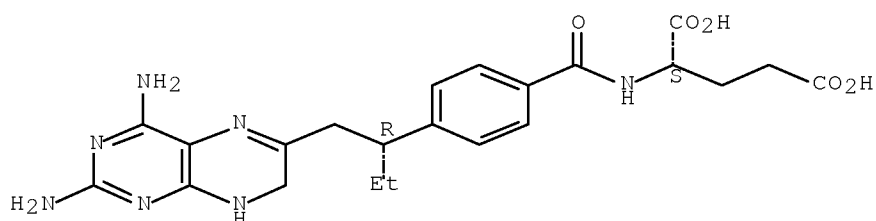
Serial No.:10/584,996



RN 102153-05-9 HCAPLUS

CN L-Glutamic acid, N-[4-[1-[(2,4-diamino-1,7-dihydro-6-pteridinyl)methyl]propyl]benzoyl]-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L61 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1986:424246 HCAPLUS Full-text

DOCUMENT NUMBER: 105:24246

TITLE: Synthesis and biological activity of resolved carbon-10 diastereomers of 10-methyl- and 10-ethyl-10-deazaminopterin

AUTHOR(S): DeGraw, J. I.; Christie, P. H.; Tagawa, H.; Kisliuk, R. L.; Gaumont, Y.; Schmid, F. A.; Sirotnak, F. M.

CORPORATE SOURCE: Bio-Org. Chem. Lab., SRI Int., Menlo Park, CA, 94025, USA

SOURCE: Journal of Medicinal Chemistry (1986), 29(6), 1056-61

CODEN: JMCMAR; ISSN: 0022-2623

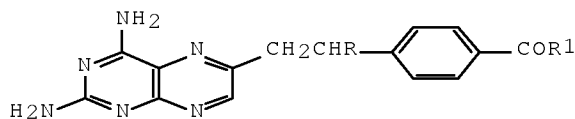
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 105:24246

ED Entered STN: 26 Jul 1986

GI



I

AB Aminodeoxydeazapteroic acids I (R = Me, Et, R1 = OH) were prepared and coupled with L-glutamate to afford the appropriate diastereomers of the title compds. [I; R1 = Glu) (II)]. Biochem., transport, and cell growth inhibitory properties in L1210 cells and folate-dependent bacteria were measured. Differences were generally less than 2-fold between diastereomeric pairs, but a factor of 3 was noted for d,L-II (R = Et) vs. the l,L diastereomer in inhibition of DHFR from L1210 cells and in cytotoxicity toward L1210 cells. An in vivo comparison of the isomers of II (R = Et) with racemic compound against L1210 in mice did not show a significant efficacy difference among the compds. However, d,L-II (R = Et) showed an acute toxicity about 2.5 times that of l,L-II (R = Et).

IT 102153-04-8P 102153-05-9P

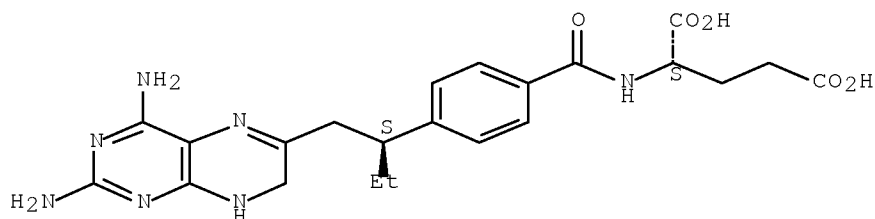
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and antibacterial and antitumor activity of)

RN 102153-04-8 HCAPLUS

CN L-Glutamic acid, N-[4-[1-[(2,4-diamino-1,7-dihydro-6-pteridiny]methyl]propyl]benzoyl]-, (S)- (9CI) (CA INDEX NAME)

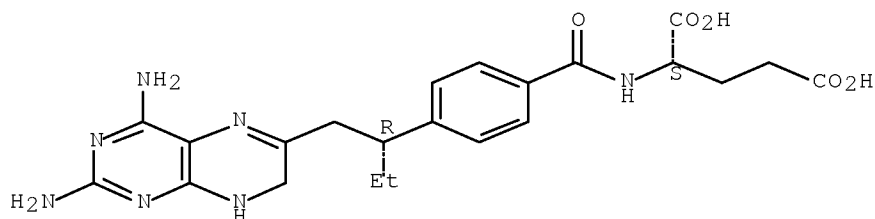
Absolute stereochemistry.



RN 102153-05-9 HCAPLUS

CN L-Glutamic acid, N-[4-[1-[(2,4-diamino-1,7-dihydro-6-pteridiny]methyl]propyl]benzoyl]-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L61 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:221167 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 102:221167

ORIGINAL REFERENCE NO.: 102:34715a,34718a

TITLE: Folate analogs. 24. Syntheses of the antitumor agents 10-deazaaminopterin (10-DAAM) and 10-ethyl-10-deazaaminopterin (10-EDAAM)

AUTHOR(S): Nair, M. G.

Serial No.:10/584,996

CORPORATE SOURCE: Coll. Med., Univ. South Alabama, Mobile, AL, 36688, USA
 SOURCE: Journal of Organic Chemistry (1985), 50(11), 1879-84
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 102:221167
 ED Entered STN: 29 Jun 1985
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

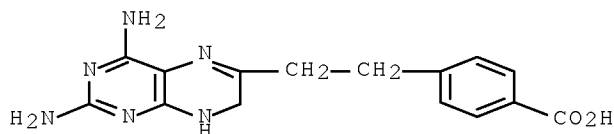
AB Title folate analogs I (R = H and Et, resp.) were prepared by condensing pterioic acids II with di-Et glutamate by ClCO₂CH₂CHMe₃ and saponifying the resulting di-Et esters of I. Phthalimide III (R₁ = CH₂Br) was treated with Ph₃P to give the corresponding phosphonium bromide, which was treated with NaOMe in DMF to give Wittig reagent III (R₁ = CH:PPh₃), which was treated with p-MeO₂CC₆H₄CHO to give enone III (R₁ = CH:CHC₆H₄CO₂Me-p) (IV). IV was reduced by Zn/HOAc to give ketone V (R = H), whereas IV was treated with EtMgBr to give V (R = Et). V (R = H, Et) were converted to oximes VI, which was treated with 6-chloro-2,4-diamino-5-nitropyrimidine to give pyrimidines VII, which were converted to II (R = N, Et) by multistep procedures.

IT 96056-44-9P 96056-45-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and oxidation of)

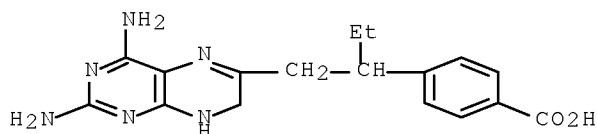
RN 96056-44-9 HCAPLUS

CN Benzoic acid, 4-[2-(2,4-diamino-1,7-dihydro-6-pteridiny1)ethyl]- (9CI)
 (CA INDEX NAME)



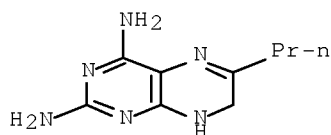
RN 96056-45-0 HCAPLUS

CN Benzoic acid, 4-[1-[(2,4-diamino-1,7-dihydro-6-pteridiny1)methyl]propyl]- (9CI) (CA INDEX NAME)



Serial No.:10/584,996

L61 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1973:537092 HCAPLUS Full-text
 DOCUMENT NUMBER: 79:137092
 ORIGINAL REFERENCE NO.: 79:22221a,22224a
 TITLE: Pteridines. XXIX. Unequivocal route to
 2,4-diamino-6-substituted pteridines
 AUTHOR(S): Taylor, Edward C.; Perlman, Katherine L.; Kim,
 Young-Ho; Sword, Ian P.; Jacobi, Peter A.
 CORPORATE SOURCE: Dep. Chem., Princeton Univ., Princeton, NJ, USA
 SOURCE: Journal of the American Chemical Society (1973
), 95(19), 6413-18
 CODEN: JACSAT; ISSN: 0002-7863
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 May 1984
 GI For diagram(s), see printed CA Issue.
 AB 2,4-Diamino-6-substituted pteridines (I) are prepared Reaction of an α -keto-
 aldoxime with aminomalononitrile gives 2-amino-3-cyano-5- substituted pyrazine
 1-oxides which yield 2,4-diamino-6-substituted pteridine 8-oxides upon
 cyclization with guanidine. 2,4-Diaminopteridines are then obtained by
 deoxygenation of the corresponding 8-oxides, or alternately by prior
 deoxygenation of these pyrazine 1-oxides, followed by cyclization with
 guanidine. The conversion of 2-amino-3-cyano-5- methylpyrazine 1-oxide to the
 corresponding 1,4-dioxide, and a number of chemical transformations of this
 latter intermediate, are also described.
 IT 50691-64-0F
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 50691-64-0 HCAPLUS
 CN 2,4-Pteridinediamine, 1,7-dihydro-6-propyl- (9CI) (CA INDEX NAME)



L61 ANSWER 6 OF 20 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
 DUPLICATE 2
 ACCESSION NUMBER: 1999-404476 [34] WPIX
 DOC. NO. CPI: C1999-119322 [34]
 TITLE: New and known pteridine derivatives are nitric oxide
 synthase inhibitors useful for the treatment of
 Parkinson's disease, Alzheimer's disease, septic shock
 and asthma
 DERWENT CLASS: B02
 INVENTOR: WERNER E
 PATENT ASSIGNEE: (WERN-I) WERNER E
 COUNTRY COUNT: 1
 PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 5922713	A	19990713	(199934)*	EN	7[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5922713	A	US 1997-882456	19970626

PRIORITY APPLN. INFO: US 1997-882456 19970626

AB US 5922713 A UPAB: 20050521

NOVELTY - Pteridine derivatives (I) and their salts are used as nitric oxide synthase inhibitors to inhibit nitric oxide synthesis in an organism.

DETAILED DESCRIPTION - The use of pteridine derivatives of formula (I) or their salts to inhibit nitric oxide synthase and nitric oxide synthesis in an organism, is new.

Z = CH(OH)X;

X = CH(OH)CH₃, (CH(OH))_nY or (CH(OH))_n(CH₂)_nW;

Y = H or lower alkyl;

W = H or OH;

n = 1-20; and

a, b = single or double bonds.

An INDEPENDENT CLAIM is also included stating that (I) are new, provided that when a and b are both double bonds, Z is not (CH(OH))₂CH₃, (CH(OH))₂CH₂OH or ((CH(OH))₃CH₂OH.

ACTIVITY - Antiparkinsonian; nootropic; neuroprotective; antibacterial; immunosuppressive; antiasthmatic.

MECHANISM OF ACTION - Nitric oxide synthase inhibitor.

The method of Mayer et al. (Neuropharmacology, 33, 1253-1259, 1994) was used to measure inhibition of recombinant rat neuronal nitric oxide synthase. Tetrahydroaminobiopterin of formula (Ia) at a concentration of 30 microM inhibited nitric oxide synthase activity by 83%, compared to the known compound 2,4-diamino-5,6,7,8-tetrahydro-6-hydroxymethyl pteridine which gave inhibition of 4% at the same concentration.

USE - As nitric oxide synthase inhibitors (claimed) for the treatment of neurodegenerative diseases such as Parkinson's disease and Alzheimer's disease, septic shock and asthma.

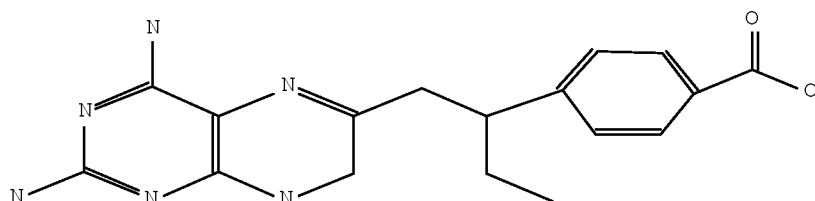
ADVANTAGE - The 5,6,7,8-tetrahydro-L-erythrobiopterin (tetrahydrobiopterin) moiety tightly binds nitric oxide synthase and provides better inhibition of nitric oxide synthase than prior art compounds.

L61 ANSWER 7 OF 20 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

Beilstein Records (BRN):	5633531
Beilstein Pref. RN (BPR):	96056-45-0
CAS Reg. No. (RN):	96056-45-0
Chemical Name (CN):	4-<1-(2,4-diamino-7,8-dihydro-pteridin-6-ylmethyl)-propyl>-benzoic acid
Autonom Name (AUN):	4-<1-(2,4-diamino-7,8-dihydro-pteridin-6-

Serial No.:10/584,996

ylmethyl)-propyl>-benzoic acid
Molec. Formula (MF): C17 H20 N6 O2
Molecular Weight (MW): 340.38
Lawson Number (LN): 30750
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 4970420
Tautomer ID (TAUTID): 5406500
Beilstein Citation (BSO): 6-26
Entry Date (DED): 1993/02/12
Update Date (DUPD): 1994/02/18



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1

This substance also occurs in Reaction Documents:

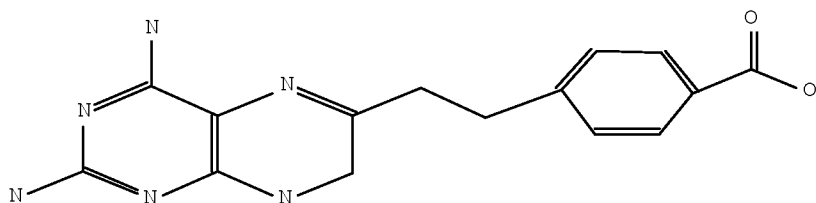
Code	Name	Occurrence
RX	Reaction Documents	2
RXREA	Substance is Reaction Reactant	1
RXPRO	Substance is Reaction Product	1

All References:
ALLREF

1. Nair, M. G., J.Org.Chem., CODEN: JOCEAH, 50(11), <1985>, 1879-1884;
BABS-5699345

L61 ANSWER 8 OF 20 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

Beilstein Records (BRN): 5613739
 Beilstein Pref. RN (BPR): 96056-44-9
 CAS Reg. No. (RN): 96056-44-9
 Chemical Name (CN): 4-<2-(2,4-diamino-7,8-dihydro-pteridin-6-yl)-ethyl>-benzoic acid
 Autonom Name (AUN): 4-<2-(2,4-diamino-7,8-dihydro-pteridin-6-yl)-ethyl>-benzoic acid
 Molec. Formula (MF): C15 H16 N6 O2
 Molecular Weight (MW): 312.33
 Lawson Number (LN): 30747
 Compound Type (CTYPE): heterocyclic
 Constitution ID (CONSID): 4965883
 Tautomer ID (TAUTID): 5396728
 Beilstein Citation (BSO): 6-26
 Entry Date (DED): 1993/02/12
 Update Date (DUPD): 1994/02/18



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	2

Serial No.:10/584,996

RXREA	Substance is Reaction Reactant	1
RXPRO	Substance is Reaction Product	1

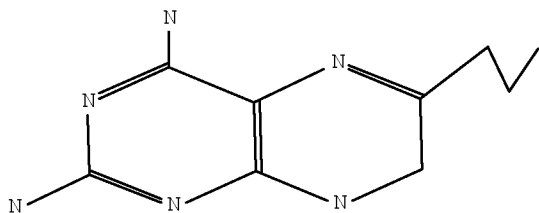
All References:

ALLREF

1. Nair, M. G., J.Org.Chem., CODEN: JOCEAH, 50(11), <1985>, 1879-1884;
BABS-5699345

L61 ANSWER 9 OF 20 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

Beilstein Records (BRN):	1117249
Beilstein Pref. RN (BPR):	50691-64-0
CAS Reg. No. (RN):	50691-64-0
Chemical Name (CN):	6-propyl-7,8-dihydro-pteridine-2,4-diamine
Autonom Name (AUN):	6-propyl-7,8-dihydro-pteridine-2,4-diamine
Molec. Formula (MF):	C9 H14 N6
Molecular Weight (MW):	206.25
Lawson Number (LN):	30710
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	1074666
Tautomer ID (TAUTID):	1122047
Beilstein Citation (BSO):	5-26-17-00374
Entry Date (DED):	1988/11/29
Update Date (DUPD):	1995/11/15



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1

Serial No.:10/584,996

CDER	Chemical Derivative	1
MP	Melting Point	1
NMR	Nuclear Magnetic Resonance	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

All References:
ALLREF

1. Taylor et al., J.Amer.Chem.Soc., CODEN: JACSAT, 95, <1973>, 6413,6414,6416

L61 ANSWER 10 OF 20 MARPAT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 147:197412 MARPAT Full-text
 TITLE: Use of hyaluronic acid as a carrier molecule for
 different classes of therapeutic active agents
 INVENTOR(S): Norbedo, Stefano; Bosi, Susanna; Bergamin, Massimo;
 Khan, Riaz Ahmed; Murano, Erminio
 PATENT ASSIGNEE(S): Eurand Pharmaceuticals Ltd., Ire.
 SOURCE: PCT Int. Appl., 46pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

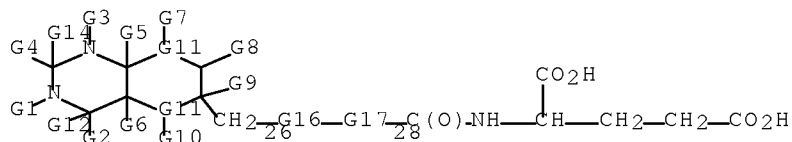
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007085629	A2	20070802	WO 2007-EP50726	20070125
WO 2007085629	A3	20071129		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			

PRIORITY APPLN. INFO.: IE 2006-49 20060125

AB The present invention refers to a drug delivery system consisting of hyaluronic acid and a therapeutic active agent, e.g., an analgesic, an antibiotic, an anesthetic, an antitumor agent, a CNS agent, a hormone, an immune agent, etc., whereby the active agent is covalently linked at the C-6 position of the N-acetyl-D-glucosamine residue of the hyaluronic acid with some exeptions. Pharmaceutical compns. obtained are in injectable form. Thus, 400 mg of 6-O-methanesulfonylhyaluronic acid TBA salt (obtained by treatment of hyaluronan TBA salt with methanesulfonyl chloride) and 333 mg of ibuprofen were dissolved in DMSO, cesium carbonate was added and the

suspension was heated to 70° for 20 h to afford 0.15 g of hyaluronic acid-ibuprofen.

MSTR 1



G11 = N

G12 = NH2

G14 = NH2

G16 = CH2

Patent location: claim 19

L61 ANSWER 11 OF 20 MARPAT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 146:288486 MARPAT [Full-text](#)

TITLE: Cleavage of antifolate compounds

INVENTOR(S): Melton, Roger; Atkinson, Anthony

PATENT ASSIGNEE(S): Protherics Medicines Development Limited, UK

SOURCE: PCT Int. Appl., 70pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

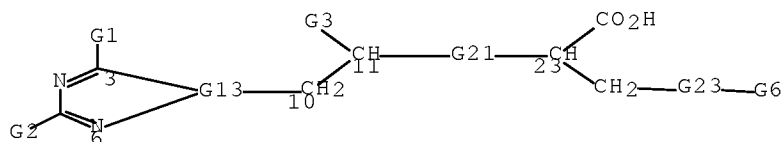
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007023243	A2	20070301	WO 2005-GB3297	20050824
WO 2007023243	A3	20070907		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				

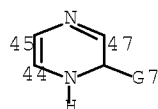
PRIORITY APPLN. INFO.: WO 2005-GB3297 20050824

AB The present invention relates to the use of an enzyme having carboxypeptidase G activity, and in particular to its use in combating toxicity caused by Pemetrexed and related antifolate compds. The kinetic properties of carboxypeptidase G (glucarpidase) (Voraxaze) in cleavage of antifolates was determined and it was shown to decrease the plasma level of Pemetrexed to non-toxic levels in a human patient.

MSTR 1



G1 = NH2
 G2 = NH2
 G13 = 45-3 44-6 47-10



Patent location: claim 1
 Note: or pharmaceutically acceptable salts and/or solvates
 Note: substitution is restricted

L61 ANSWER 12 OF 20 MARPAT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 146:251859 MARPAT [Full-text](#)
 TITLE: Preparation of condensed pyrimidine derivatives as inhibitors of folic acid-dependent enzymes.
 INVENTOR(S): Stoicescu, Dan
 PATENT ASSIGNEE(S): Cyprus
 SOURCE: Eur. Pat. Appl., 27pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1754484	A1	20070221	EP 2005-107582	20050817
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
AU 2006281359	A1	20070222	AU 2006-281359	20060816
CA 2583437	A1	20070222	CA 2006-2583437	20060816
WO 2007020277	A2	20070222	WO 2006-EP65380	20060816
WO 2007020277	A3	20070426		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA,				

Serial No.:10/584,996

UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

EP 1809292 A2 20070725 EP 2006-792859 20060816

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
 BA, HR, MK, YU

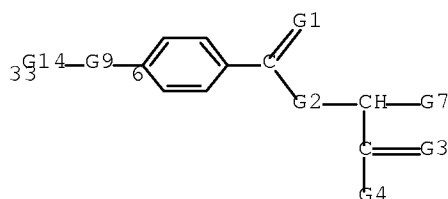
US 2007265444 A1 20071115 US 2007-663567 20070629

PRIORITY APPLN. INFO.: EP 2005-107582 20050817

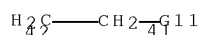
WO 2006-EP65380 20060816

AB Title compds. [I; Z = O, S; B = NR₂, CH₂NR₂, CH₂CH₂NR₂, CH₂CHR₇, CH₂O; R₁ = NH₂, OH; R₂ = H, alkyl, alkenyl, alkynyl; R₃ = CO₂R₈, COSR₈, CONHR₈, C(NH)SR₈, etc.; R₄ = H, CH₂R₅, CH₂CH₂R₅; R₇ = H, alkyl, alkoxy; R₈ = H, Me, Et, Pr, Me₂CH, Bu, Me₃C, Me₂CHCH₂; A = Q₁, Q₂; X, Y = atoms to form (substituted) (aromatic) (hetero)cyclyl], were prepared Thus, title compound (II) (preparation from 3-chloropropanoyl chloride, Et cyanoacetate, α-bromo-p-nitroacetophenone, and 2,4-diamino-6-bromomethylpteridine given) inhibited dihydrofolate reductase with a relative IC₅₀ = 0.75, vs 1.0 for methotrexate.

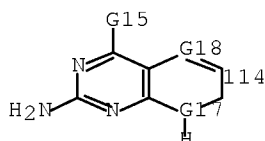
MSTR 1



G9 = 42-33 41-6



G14 = 114



G15 = NH₂

G17 = N

G18 = N

Patent location: claim 1

Note: substitution is restricted
Note: or pharmaceutically acceptable salts

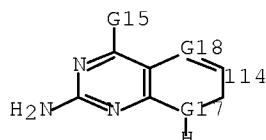
MSTR 2

G14—G9

G9 = 332

~~G20~~—G21

G14 = 114



G15 = NH2
G17 = N
G18 = N
G20 = (1-2) CH2
Patent location:

claim 22

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 13 OF 20 MARPAT COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 146:725 MARPAT Full-text
TITLE: Antiproliferative hyaluronic acid conjugates and preparation thereof
INVENTOR(S): Murano, Erminio; Flaibani, Antonella; Bergamin, Massimo; Norbedo, Stefano; Sorbi, Claudia; Khan, Riaz Ahmed
PATENT ASSIGNEE(S): Eurand Pharmaceuticals Limited, Ire.
SOURCE: PCT Int. Appl., 33pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006122954	A2	20061123	WO 2006-EP62388	20060517
WO 2006122954	A3	20070315		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

Serial No.:10/584,996

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

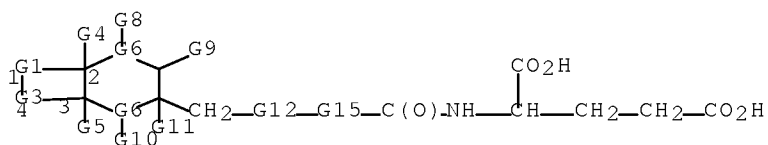
PRIORITY APPLN. INFO.:

IE 2005-328

20050518

AB The invention discloses esterified conjugates of hyaluronic acid having antiproliferative activity. Preparation of hyaluronic acid conjugates with methotrexate are described.

MSTR 1



G1 = 11-4 12-2



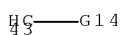
G2 = NH₂

G3 = 19-3 20-1



G6 = N

G12 = 43



Patent location:

claim 1

Serial No.:10/584,996

L61 ANSWER 14 OF 20 MARPAT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 145:46083 MARPAT Full-text

TITLE: Processes for preparation of aminotetrahydropteridines

INVENTOR(S): Noe, Christian

PATENT ASSIGNEE(S): Vasopharm Biotech G.m.b.H., Germany

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006058669	A2	20060608	WO 2005-EP12644	20051125
WO 2006058669	A3	20060817		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1669355	A1	20060614	EP 2004-28614	20041202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				

PRIORITY APPLN. INFO.: EP 2004-28614 20041202

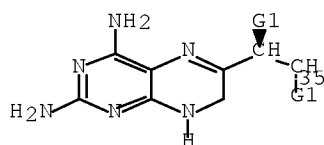
OTHER SOURCE(S): CASREACT 145:46083

AB The present invention provides a process for preparing aminotetrahydropteridines I [wherein A and B = independently H or hydroxy protective groups; Z = H or dithioacetal moiety] comprising transformation of D-ribose into open chain osone with protected hydroxy groups, followed by reaction with tetraaminopyrimidine, reduction, and cleavage of the protective groups. For example, D-ribose was transformed to 3,4-O-benzyl-5-desoxy-L-erythro-pentos-2-ulose in a multi-step synthesis. The osone obtained in previous step was treated with hydroxylamine, followed by reaction with tetraaminopyrimidine dihydrochloride and hydrogenation to give II. The title compds. are useful as inhibitors of NO-synthase.

MSTR 1A

G3—G11

G3 = 35



Patent location:

claim 1

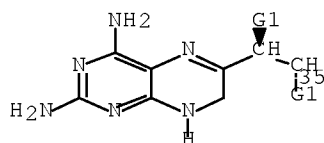
Note:

also incorporates claim 2, 3 and 4

MSTR 1B

G3—Me

G3 = 35



Patent location:

claim 1

Note:

also incorporates claim 2, 3 and 4

L61 ANSWER 15 OF 20 MARPAT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 143:299139 MARPAT Full-text

TITLE: Use of enzyme carboxypeptidase G for combating toxicity caused by an antifolate compound

INVENTOR(S): Melton, Roger; Atkinson, Anthony

PATENT ASSIGNEE(S): Protherics Molecular Design Limited, UK

SOURCE: PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005084695	A2	20050915	WO 2005-GB751	20050228
WO 2005084695	A3	20051208		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

Serial No.:10/584,996

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

AU 2005218987	A1	20050915	AU 2005-218987	20050228
CA 2557610	A1	20050915	CA 2005-2557610	20050228
EP 1727548	A2	20061206	EP 2005-717830	20050228

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

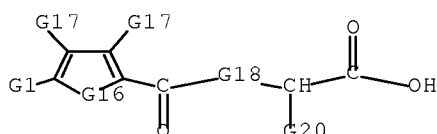
CN 1950088	A	20070418	CN 2005-80013842	20050228
BR 2005008053	A	20070717	BR 2005-8053	20050228
JP 2007524711	T	20070830	JP 2007-500299	20050228
KR 2007036023	A	20070402	KR 2006-717341	20060828
IN 2006DN04935	A	20070817	IN 2006-DN4935	20060828
US 2007243182	A1	20071018	US 2007-590789	20070212

PRIORITY APPLN. INFO.:

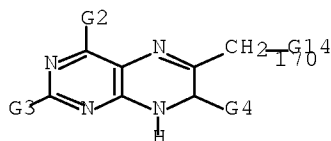
GB 2004-4487	20040228
WO 2005-GB751	20050228

AB A method of combating toxicity caused by an antifolate compound in an individual who has been administered the compound. The method comprises administering an enzyme that has activity to the individual. A method of cleaving a compound comprising a structural fragment of Formula I (A6 represents O or S; R8 represents H or one or two substituents selected from halo, C1-4 alkyl and C1-4 alkoxy; R3 represents H or C1-4 alkyl; R4 represents -CH2C(R9a)(R9b)-D where R9a and R9b independently represent H or C1-4 alkyl, or R9a and R9b together represent =C(H)R10 and R10 represents H or C-4-alkyl and D represents C(O)OH, tetrazol-5-yl, etc.), the method comprising contacting the compound comprising the structural fragment of Formula I with an enzyme that has carboxypeptidase G activity.

MSTR 1



G1 = 170



G2 = NH2
 G3 = NH2
 G14 = 95

Patent location: claim 1
 Note: or pharmaceutically acceptable salts or solvates

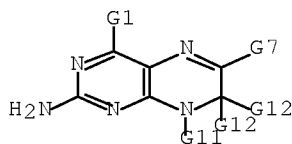
L61 ANSWER 16 OF 20 MARPAT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 143:153229 MARPAT Full-text
 TITLE: Preparation of pharmaceutical compositions containing
 4-amino-7,8-dihydropteridines and their use for the
 treatment of diseases which are caused by an increased
 nitric oxide level
 INVENTOR(S): Doblhofer, Robert; Tegtmeier, Frank
 PATENT ASSIGNEE(S): Vasopharm Biotech G.m.b.H., Germany
 SOURCE: PCT Int. Appl., 46 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005063752	A1	20050714	WO 2003-EP14970	20031230
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2552195	A1	20050714	CA 2003-2552195	20031230
AU 2003290127	A1	20050721	AU 2003-290127	20031230
EP 1699793	A1	20060913	EP 2003-782489	20031230
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK			
JP 2007525407	T	20070906	JP 2005-512684	20031230
IN 2006DN03444	A	20070831	IN 2006-DN3444	20060615
PRIORITY APPLN. INFO.:			WO 2003-EP14970	20031230

AB The present invention relates to the area of NO synthase inhibition and, more particularly, relates to novel 4-amino-7,8-dihydropteridines, e.g., I [R1, R2 = H, C1-20-alkyl, C1-20-alkenyl, C1-20-alkynyl, C3-8-cycloalkyl, cycloalkenyl, (cycloalkyl)alkyl, aryl, (c1-3-alkyl)aryl, etc.; NR1R2 = 3- to 8-membered ring (optionally containing 1 or 2 other heteroatoms - O, S, N); R4 = C1-20-alkyl, C1-20-alkenyl, C1-20-alkynyl, C3-8-cycloalkyl, cycloalkenyl, (cycloalkyl)alkyl, aryl, (C1-3-alkyl)aryl, etc.; R6, R7 = F, Cl, I, Br, O-(C1-10-alkyl), OPh, OC(:O)(C1-10-alkyl), OC(:O)aryl, NR8R9, oxo, Ph, C(:O)(C1-5-alkyl), CF3, CN, CONR8R9, CO2H, C(:O)O-(C1-5-alkyl), C(:O)O-aryl, S(O)n-(C1-5-alkyl), SO2NR8R9; R8 = H, C1-20-alkyl; R9 = H, C1-20-alkyl, aryl (preferably Ph); R11 = H, C1-20-alkyl, aryl, CO-alkyl, CO-aryl; R12, R13 = H, C1-10-alkyl, aryl, O-(C1-10-alkyl), OPh, OC(:O)-C1-10-alkyl, OC(:O)-aryl, NR8R9, Ph, C(:O)-C1-10-alkyl, CF3, CN, CONR8R9, CO2H, etc.; aryl = (un)substituted Ph, naphthyl, heteroaryl; heteroaryl = 5- to 7-membered ring (optionally containing an addnl. heteroatom - O, N, S); n = 0 - 2], or their

pharmaceutically acceptable acid addition salts, hydrates and esters, pharmaceutical compns. containing said compds., and the use of said compds. in the treatment of a disorder characterized by a disturbed nitric oxide level. The patent particularly excludes compds. II [R21, R22, R23, R24 = ; R25 = H, Me, CH2OH, CHO, (un)branched C1-9-alkyl, (CHOH)nY, (CHOH)n(CH2)mW; Y = H, C1-9-alkyl; W = H, OH; n, m = 1 - 20]. Thus, 4-[(Cyclohexylmethyl)amino]-5,6,7,8-tetrahydrobiopterin (III) was prepared from biopterin (IV) via acetylation with Ac2O in pyridine, reaction with PhCH2CH2OH in dioxane containing Ph3P, amination with (cyclohexylmethyl)amine in dioxane, and hydrogenation in CF2CO4H containing catalytic PtO2. The in vivo stability [t1/2 = << 5 min. (tetrahydro); t1/2 = 48 min. (dihydro)] and NO release inhibitor activity for I was determined

MSTR 1



G1 = NH2

G7 = alkyl <containing 1-20 C>

(opt. substd. by 1 or more G17)

Patent location: claim 1

Note: substitution is restricted

Note: and tautomeric forms and mixtures and physiologically tolerated salts, hydrates and esters

Note: additional oxo formation also claimed

Stereochemistry: and stereoisomeric forms and mixtures

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 17 OF 20 MARPAT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 142:404279 MARPAT Full-text

TITLE: Use of pteridine derivatives for the treatment of increased intracranial pressure and secondary ischemia

INVENTOR(S): Doblhofer, Robert; Tegtmeier, Frank

PATENT ASSIGNEE(S): Vasopharm Biotech GmbH, Germany

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037286	A1	20050428	WO 2003-EP3096	20030325
W: US				
CA 2519919	A1	20041007	CA 2003-2519919	20031008
WO 2004084906	A1	20041007	WO 2003-EP11138	20031008
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				

Serial No.:10/584,996

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
 GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
 LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
 OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
 TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003293607 A1 20041018 AU 2003-293607 20031008
 EP 1605947 A1 20051221 EP 2003-788945 20031008
 EP 1605947 B1 20060802

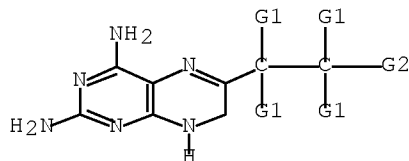
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

CN 1758913 A 20060412 CN 2003-80110211 20031008
 JP 2006514965 T 20060518 JP 2004-569858 20031008
 AT 334681 T 20060815 AT 2003-788945 20031008
 ES 2270151 T3 20070401 ES 2003-3788945 20031008
 MX 2005PA09491 A 20060222 MX 2005-PA9491 20050906
 US 2007032498 A1 20070208 US 2006-549200 20060703

PRIORITY APPLN. INFO.: WO 2003-EP3096 20030325
 WO 2003-EP11138 20031008

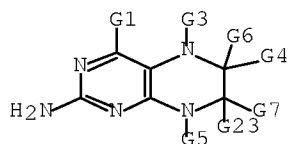
AB The invention discloses the use of pteridine derivs. for treating increased intracranial pressure and/or secondary ischemia. Compound preparation is included.

MSTR 2



Patent location: claim 4

MSTR 3



G1 = NH2

G4 = alkynyl (opt. substd.)

Patent location: claim 6

Note: and physiologically tolerated salts, hydrates, and

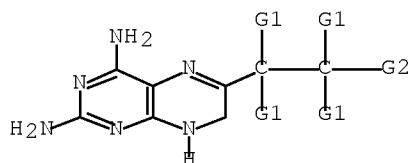
Stereochemistry: esters, and tautomers
and stereoisomers

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 18 OF 20 MARPAT COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 141:307610 MARPAT Full-text
TITLE: Use of pteridine derivatives for the treatment of
increased intracranial pressure, secondary ischemia,
and disorders associated with an increased level of
cytotoxic reactive oxygen species
INVENTOR(S): Doblhofer, Robert; Tegtmeier, Frank
PATENT ASSIGNEE(S): Vasopharm Biotech G.m.b.H., Germany
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

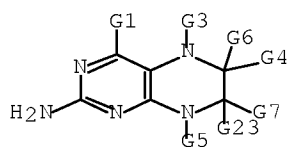
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004084906	A1	20041007	WO 2003-EP11138	20031008
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2005037286	A1	20050428	WO 2003-EP3096	20030325
W: US				
CA 2519919	A1	20041007	CA 2003-2519919	20031008
AU 2003293607	A1	20041018	AU 2003-293607	20031008
EP 1605947	A1	20051221	EP 2003-788945	20031008
EP 1605947	B1	20060802		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006514965	T	20060518	JP 2004-569858	20031008
MX 2005PA09491	A	20060222	MX 2005-PA9491	20050906
US 2007032498	A1	20070208	US 2006-549200	20060703
PRIORITY APPLN. INFO.:			WO 2003-EP3096	20030325
			WO 2003-EP11138	20031008

AB The present invention relates to the use of pteridine derivs. for the
treatment of increased intracranial pressure, secondary ischemia, and
disorders associated with an increased level of cytotoxic reactive oxygen
species. H4-aminobiopterin (preparation given) caused a clear concentration
dependent contraction of both rat basilar arteries and middle cerebral
arteries.



Patent location: claim 4

MSTR 3



G1 = NH₂

G4 = alkynyl (opt. substd.)

Patent location: claim 6

Note: and physiologically tolerated salts, hydrates, and esters, and tautomers

Stereochemistry: and stereoisomers

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 19 OF 20 MARPAT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 135:258794 MARPAT Full-text

TITLE: Polysaccharide esters of N-derivatives of glutamic acid, their preparation and use

INVENTOR(S): Miglierini, Giuliana; Stucchi, Luca; Rastrelli, Alessandro

PATENT ASSIGNEE(S): Societa Cooperativa Centro Ricerche Poly-Tech A Responsabilita Limitata, Italy

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068105	A1	20010920	WO 2001-EP3050	20010316
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				

Serial No.:10/584,996

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IT 2000MI0559	A1	20010917	IT 2000-MI559	20000317
IT 1318403	B1	20030825		
CA 2403063	A1	20010920	CA 2001-2403063	20010316
BR 2001009294	A	20021217	BR 2001-9294	20010316
EP 1274446	A1	20030115	EP 2001-931536	20010316
EP 1274446	B1	20050914		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

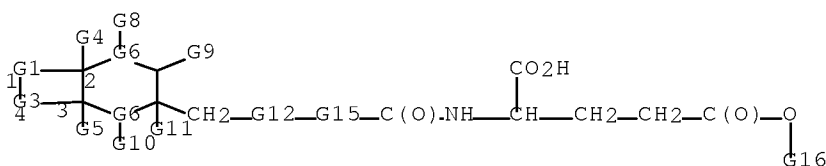
JP 2003526720	T	20030909	JP 2001-566669	20010316
AT 304363	T	20050915	AT 2001-931536	20010316
ES 2248322	T3	20060316	ES 2001-1931536	20010316
AU 784655	B2	20060518	AU 2001-58286	20010316
MX 2002PA09057	A	20040906	MX 2002-PA9057	20020917
ZA 2002008299	A	20031215	ZA 2002-8299	20021015
US 2003158125	A1	20030821	US 2003-221703	20030127
US 6844328	B2	20050118		
US 2005065112	A1	20050324	US 2004-950879	20040927

PRIORITY APPLN. INFO.:

IT 2000-MI559	20000317
WO 2001-EP3050	20010316
US 2003-221703	20030127

AB These polysaccharidic esters have antiproliferative activity and are characterized by a low systemic toxicity. The esters are used in the prevention and therapy of diseases caused by cellular hyperproliferation, particularly psoriasis, tumors, rheumatoid arthritis, or intestinal inflammatory pathologies. I (R₂,R₄ = NH₂; X,Y = N; Z = NMe; Ar = 1,4-phenylene) was esterified with halogenated scleroglucan.

MSTR 1



G1 = 11-4 12-2



G2 = NH₂

G3 = 19-3 20-1



G6 = N
G12 = 43

H₅—G14

Patent location: claim 1

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

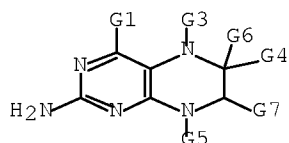
L61 ANSWER 20 OF 20 MARPAT COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 134:237499 MARPAT Full-text
TITLE: Preparation of N-substituted-4-aminopteridines as NO synthase inhibitors for use as pharmaceuticals
INVENTOR(S): Pfleiderer, Wolfgang; Schmidt, Harald; Froehlich, Lothar; Kotsonis, Peter; Taghavi-Moghadam, Shahriyar
PATENT ASSIGNEE(S): Vasopharm Biotech G.m.b.H. & Co. K.-G., Germany
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001021619	A1	20010329	WO 2000-EP8833	20000911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19944767	A1	20010329	DE 1999-19944767	19990917
EP 1216246	A1	20020626	EP 2000-964154	20000911
EP 1216246	B1	20050824		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2004522690	T	20040729	JP 2001-524995	20000911
AT 302778	T	20050915	AT 2000-964154	20000911
ES 2248124	T3	20060316	ES 2000-964154	20000911
US 6844343	B1	20050118	US 2002-70976	20020719
PRIORITY APPLN. INFO.: DE 1999-19944767 19990917				
WO 2000-EP8833 20000911				
AB Pteridines, such as I [R1, R2 = H, alkyl, aryl, arylalkyl; R1R2 = nitrogen bound heterocyclyl, such as 1-piperidinyl or 4-morpholinyl; R4 = alkyl, alkenyl, alkynyl, cycloalkenyl, aryl, etc.; R3, R5 = acyl, aroyl, R6 = R7 = H,				

Serial No.:10/584,996

or R3R6 = R5R7 = bond;], were prepared for pharmaceutical use. Thus, pteridine II was prepared via cyclocondensation of N4,N4-dimethylpyrimidinetetramine dihydrochloride and phenylglyoxal monoxime. The prepared pteridines were tested for nitric oxide synthase inhibiting activity.

MSTR 1



G1 = 20



G4 = alkyl (opt. substd. by 1 or more G8)

Patent location: claim 1

Note: and physiologically useful salts, hydrates, and esters

Stereochemistry: and stereoisomers and tautomers

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

Serial No.:10/584,996

Structure Search

First 10, Middle 10 and Last 10 Results

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:40:03 ON 27 DEC 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 27 Dec 2007 VOL 147 ISS 26

FILE LAST UPDATED: 26 Dec 2007 (20071226/ED)

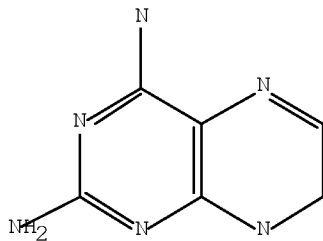
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> D QUE L37

L3 STR



Structure attributes must be viewed using STN Express query preparation.

L5 3639 SEA FILE=REGISTRY SSS FUL L3

L32 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L34 184 SEA FILE=REGISTRY SUB=L5 SSS FUL L32

L36 252 SEA FILE=HCAPLUS ABB=ON PLU=ON L34

L37 220 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (PRY<=2003 OR
AY<=2003 OR PY<=2003)

=> S L37 NOT L41,L48,L47
L62 215 L37 NOT (L41 OR L48 OR L47)

=> D IBIB ED ABS HITSTR L62 1-10; D IBIB ED ABS HITSTR L62 100-110; D IBIB ED ABS HITSTR L62 205-215

L62 ANSWER 1 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:633002 HCAPLUS Full-text
DOCUMENT NUMBER: 147:73054
TITLE: Synthesis of methotrexate-containing heterodimeric molecules
INVENTOR(S): Murthi, Krishna K.; Smith, Chase C.
PATENT ASSIGNEE(S): Gpc Biotech, Inc., USA
SOURCE: U.S., 54pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 7230101	B1	20070612	US 2003-651340	20030828 <--
PRIORITY APPLN. INFO.:			US 2002-407131P	P 20020828 <--
OTHER SOURCE(S):	MARPAT	147:73054		
ED Entered STN:	13 Jun	2007		
GI				

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The present invention relates to novel compns. of methotrexate-containing heterodimeric probe mols., also known as chemical inducers of dimerization (CID), useful in three-hybrid assays. The invention further relates to synthesis of said compns. and their intermediates. Another aspect of the invention is a method for using the heterodimeric probe mols. described herein in drug screens to identify potential protein targets to a given ligand, optimize protein-ligand interactions, or identify potential ligands for a given protein target (no data). Thus, methotrexate derivative (I) was condensed with purvalanol B derivative (II; R = H) using 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride, HOBt, and diisopropylethylamine in CH₂Cl₂ followed by treatment with 90% aqueous CF₃CO₂H solution to give II (R = Q) as a methotrexate-containing heterodimeric probe which is a ligand of both DNA binding fusion protein and activation domain fusion protein.

IT ~~73978-41-3~~, 2,4-Diaminopyrimido[4,5-b]pyrazine-6-methanol monohydrochloride

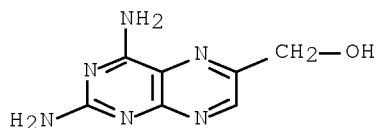
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of methotrexate-containing heterodimeric probe mols. as chemical

inducers of dimerization in three-hybrid assays or in drug screens to identify potential protein targets)

RN 73978-41-3 HCAPLUS

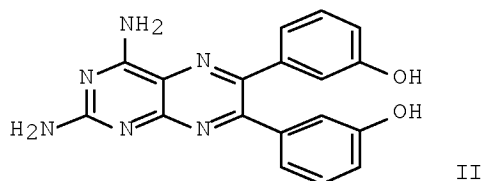
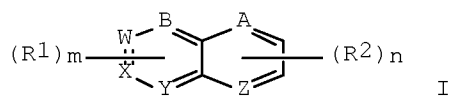
CN 6-Pteridinemethanol, 2,4-diamino-, hydrochloride (1:1) (CA INDEX NAME)



L62 ANSWER 2 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:1335074 HCAPLUS Full-text
 DOCUMENT NUMBER: 144:69859
 TITLE: Indoles, pteridines, pyridopyrazines, and
 benzotriazines as vasculostatic agents, their
 preparation, pharmaceutical compositions and use in
 therapy
 INVENTOR(S): Wrasidlo, Wolfgang; Doukas, John; Royston, Ivor;
 Noronha, Glenn; Hood, John D.; Dneprovskaja, Elena;
 Gong, Xianchang; Splittgerber, Ute; Zhao, Ningning
 PATENT ASSIGNEE(S): Targegen, Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., 95 pp., Cont.-in-part of U.S.
 Ser. No. 679,209.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

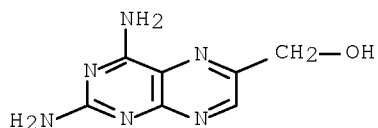
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005282814	A1	20051222	US 2005-105845	20050413 <--
US 2004167198	A1	20040826	US 2003-679209	20031002 <--
US 7208493	B2	20070424		
US 2007208019	A1	20070906	US 2007-653190	20070111 <--
PRIORITY APPLN. INFO.:			US 2002-415981P	P 20021003 <--
			US 2003-440234P	P 20030114 <--
			US 2003-443752P	P 20030129 <--
			US 2003-463818P	P 20030417 <--
			US 2003-466983P	P 20030430 <--
			US 2003-479295P	P 20030617 <--
			US 2003-679209	A2 20031002 <--

OTHER SOURCE(S): CASREACT 144:69859; MARPAT 144:69859
 ED Entered STN: 23 Dec 2005
 GI



AB The invention relates to nitrogen heterocyclic compds. of formula I, which are useful for treating disorders associated with compromised vasculostasis. In compds. I, each of A, B, W, X, Y, and Z is independently selected from C, C(O), N, and NR₃, where R₃ is H or (un)substituted alkyl; each R₁ is independently halo, OR₄, N(R₄)₂, or SR₄, where R₄ is H, lower alkyl, aryl, heteroaryl, etc.; each R₂ is independently halo, OR₅, N(R₅)₂, SR₅, OPO₃H₂, (un)substituted alkyl, (un)substituted aryl, (un)substituted heteroaryl, where R₅ is H, lower alkyl, aryl, heteroaryl, etc.; and each of m and n is independently an integer from 1 to 4. The invention also relates to the preparation of I, pharmaceutical compns. comprising a compound I and a pharmaceutically acceptable carrier, as well as to the use of the compns. for the treatment of a variety of disorders including stroke, myocardial infarction, cancer, ischemia/reperfusion injury, autoimmune diseases such as rheumatoid arthritis, eye diseases such as retinopathies or macular degeneration, inflammatory diseases, vascular leakage syndrome, edema, transplant rejection, adult/acute respiratory distress syndrome (ARDS), and the like. Cyclocondensation of 3,3'-dihydroxybenzil with 2,4,5,6-tetraaminopyrimidine sulfate results in the formation of diaminopteridine II. Compound II expresses an IC₅₀ value of 83 nM in an assay for the inhibition of the human p120 γ subunit of PI3 kinase and results in 65% reduction of myocardial infarction in rats.

IT 76145-91-0, (2,4-DiaminoPteridin-6-yl)-methanol hydrobromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; preparation of vasculostatic agents and use for treatment of disorders associated with compromised vasculostasis)
 RN 76145-91-0 HCAPLUS
 CN 6-Pteridinemethanol, 2,4-diamino-, hydrobromide (9CI) (CA INDEX NAME)

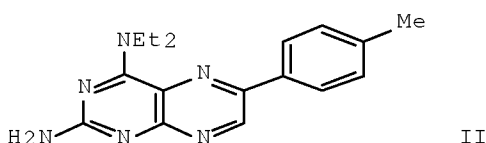
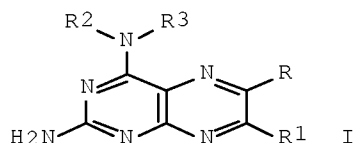


● x HBr

Serial No.:10/584,996

L62 ANSWER 3 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:561514 HCAPLUS Full-text
 DOCUMENT NUMBER: 143:211928
 TITLE: Preparation of Pteridine derivatives as nitric oxide synthase inhibitors
 INVENTOR(S): Yao, Qizheng
 PATENT ASSIGNEE(S): China Pharmaceutical University, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

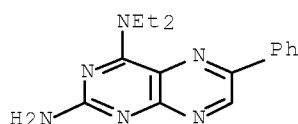
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1546491	A	20041117	CN 2003-10106588	20031210 <--
PRIORITY APPLN. INFO.:			CN 2003-10106588	20031210 <--
OTHER SOURCE(S): CASREACT 143:211928; MARPAT 143:211928				
ED Entered STN: 29 Jun 2005				
GI				



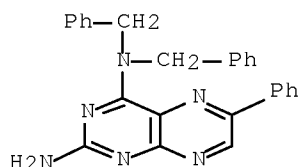
AB The title compds. I [wherein R = H, (un)substituted alkyl, alkoxy, etc.; R₁ = H, Ph, alkyl, etc.; R₂ and R₃ = independently alkyl, PhCH₂, etc.] or pharmaceutically acceptable salts thereof are prepared as NO synthetase inhibitors for the prevention and treatment of diseases caused by NO level rise. For example, the compound II was prepared II inhibited NO generation with ID₅₀ of 14.85 μM.

IT 247913-54-8P 247913-56-0P 862503-57-9P
 862503-60-4P 862503-61-5P 862503-62-6P
 862503-64-8P 862503-65-9P 862503-66-0P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (drug candidate; preparation of pteridine derivs. as nitric oxide synthase inhibitors)

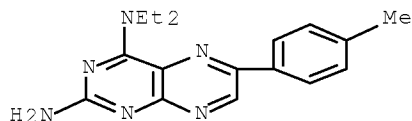
RN 247913-54-8 HCAPLUS
 CN 2,4-Pteridinediamine, N₄,N₄-diethyl-6-phenyl- (CA INDEX NAME)



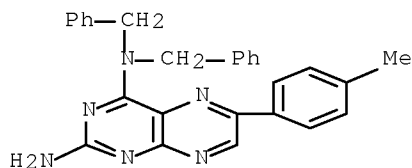
RN 247913-56-0 HCAPLUS
 CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



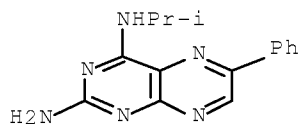
RN 862503-57-9 HCAPLUS
 CN 2,4-Pteridinediamine, N4,N4-diethyl-6-(4-methylphenyl)- (CA INDEX NAME)



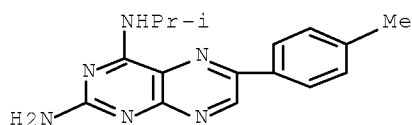
RN 862503-60-4 HCAPLUS
 CN 2,4-Pteridinediamine, 6-(4-methylphenyl)-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



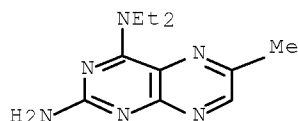
RN 862503-61-5 HCAPLUS
 CN 2,4-Pteridinediamine, N4-(1-methylethyl)-6-phenyl- (CA INDEX NAME)



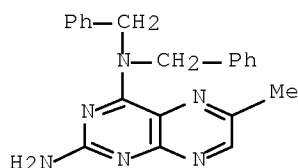
RN 862503-62-6 HCAPLUS
 CN 2,4-Pteridinediamine, N4-(1-methylethyl)-6-(4-methylphenyl)- (CA INDEX NAME)



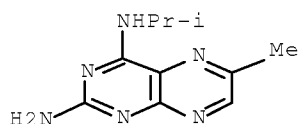
RN 862503-64-8 HCAPLUS
CN 2,4-Pteridinediamine, N4,N4-diethyl-6-methyl- (CA INDEX NAME)



RN 862503-65-9 HCAPLUS
CN 2,4-Pteridinediamine, 6-methyl-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



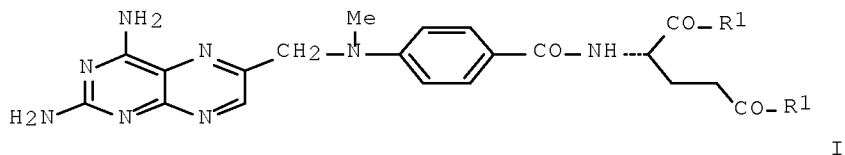
RN 862503-66-0 HCAPLUS
CN 2,4-Pteridinediamine, 6-methyl-N4-(1-methylethyl)- (CA INDEX NAME)



L62 ANSWER 4 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:371673 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 142:392421
TITLE: Preparation of methotrexate
INVENTOR(S): Amonkar, Ashok Jaganath; Ganu, Ulhas Kashinath; Indap, Manohar Atmaram
PATENT ASSIGNEE(S): Department of Atomic Energy, Government of India, India
SOURCE: Indian, 29 pp.
CODEN: INXXAP
DOCUMENT TYPE: Patent

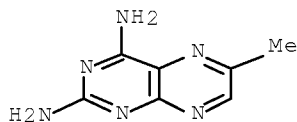
LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 182947	A1	19990814	IN 1998-BO236	19980422 <--
PRIORITY APPLN. INFO.:			IN 1998-BO236	19980422 <--
OTHER SOURCE(S):	CASREACT 142:392421			
ED Entered STN:	02 May 2005			
GI				

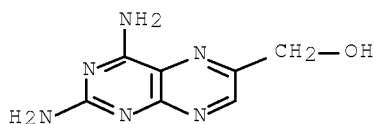


AB Preparation of methotrexate I [R = OH] via the N-alkylation of di-Et N-(p-N-methylaminobenzoyl)glutamate by 2,4-diamino-6- (bromomethyl)pteridine was disclosed. For example, a suspension of di-Et N-(p-N-methylaminobenzoyl)glutamate (6.7 mmol), 2,4-diamino-6- (bromomethyl)pteridine HBr (5.8 mmol) in di-Me N-acetamide was stirred at 55°C for 4 h, after work-up afforded the di-Et ester of methotrexate I [R = OH] in 66.5% yield. In P-388 lymphocytic leukemia mice survival assays, the sodium salt of compound I [R = ONa], at 2.5 mg/kg dosage over 1, 5, 9 days exhibited a medium survival rate of 19.5 days.

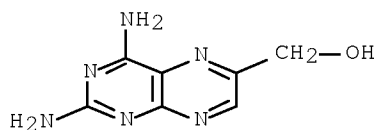
IT 708-74-7P 945-24-4P 57963-59-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of methotrexate)
 RN 708-74-7 HCAPLUS
 CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)



RN 945-24-4 HCAPLUS
 CN 6-Pteridinemethanol, 2,4-diamino- (CA INDEX NAME)



RN 57963-59-4 HCAPLUS
 CN 6-Pteridinemethanol, 2,4-diamino-, monohydrobromide (9CI) (CA INDEX NAME)



● HBr

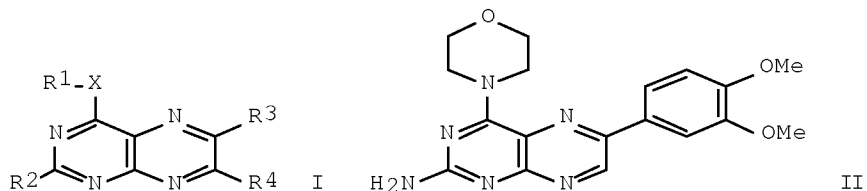
L62 ANSWER 5 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:259882 HCAPLUS Full-text
 DOCUMENT NUMBER: 142:336393
 TITLE: Preparation of pteridine derivatives for the treatment
 of septic shock and TNF- α -related diseases.
 INVENTOR(S): Waer, Mark Jozef Albert; Herdewijn, Piet Andre Maurits
 Maria; De Jonghe, Steven Cesar Alfons; Marchand,
 Arnaud Didier Marie; Yuan, Lin; El Hassane, Sefrioui
 PATENT ASSIGNEE(S): 4 Aza Bioscience Nv, Belg.
 SOURCE: PCT Int. Appl., 79 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005025574	A2	20050324	WO 2004-EP10198	20040913 <--
WO 2005025574	A3	20050630		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
GB 2405793	A	20050316	GB 2003-21384	20030912 <--
GB 2413324	A	20051026	GB 2004-8955	20040422
AU 2004271721	A1	20050324	AU 2004-271721	20040913 <--
CA 2534549	A1	20050324	CA 2004-2534549	20040913 <--
EP 1663244	A2	20060607	EP 2004-765120	20040913 <--
EP 1663244	B1	20070815		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 2007533617	T	20071122	JP 2006-525783	20040913 <--
US 2007004721	A1	20070104	US 2006-595161	20060310 <--
PRIORITY APPLN. INFO.:			GB 2003-21384	A 20030912 <--

OTHER SOURCE(S): CASREACT 142:336393; MARPAT 142:336393

ED Entered STN: 25 Mar 2005

GI



AB Pteridine derivs. of formula I [X = O, SOm; m = 0-2; R₁ = alkyl, cycloalkyl, aryl, arylalkyl, heterocyclyl, etc.; R₂ = amino, acylamino, carbamoyl, ureido, etc.; R₃, R₄ = H, halo, alkyl, carboxyalkyl, arylamino, etc.; R₃R₄ = alkylene, etc.] are prepared for the manufacture of a medicament for the prevention or treatment of septic shock and TNF- α related disorders. Thus, II was prepared, and had IC₅₀ of 0.4 μ M against TNF- α .

IT 247913-51-5P 247913-54-8P 247913-56-0P
 278799-96-5P 278800-02-5P 278800-24-1P
 278800-27-4P 278800-29-6P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pteridine derivs. for treatment of septic shock and TNF- α -related diseases)

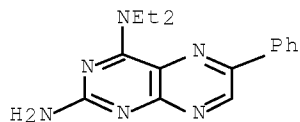
RN 247913-51-5 HCAPLUS

CN 2,4-Pteridinediamine, N₄,N₄-dimethyl-6-phenyl- (CA INDEX NAME)



RN 247913-54-8 HCAPLUS

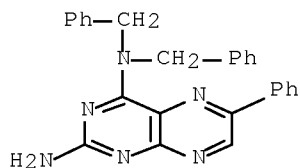
CN 2,4-Pteridinediamine, N₄,N₄-diethyl-6-phenyl- (CA INDEX NAME)



RN 247913-56-0 HCAPLUS

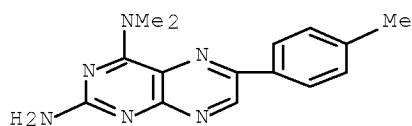
Serial No.:10/584,996

CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



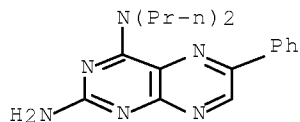
RN 278799-96-5 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4-dimethyl-6-(4-methylphenyl)- (CA INDEX NAME)



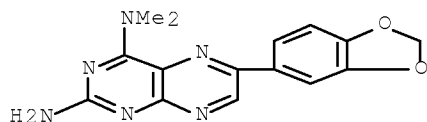
RN 278800-02-5 HCAPLUS

CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-dipropyl- (CA INDEX NAME)



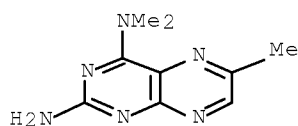
RN 278800-24-1 HCAPLUS

CN 2,4-Pteridinediamine, 6-(1,3-benzodioxol-5-yl)-N4,N4-dimethyl- (CA INDEX NAME)

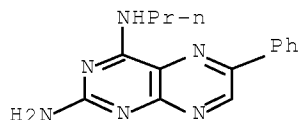


RN 278800-27-4 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4,6-trimethyl- (CA INDEX NAME)



RN 278800-29-6 HCAPLUS
 CN 2,4-Pteridinediamine, 6-phenyl-N4-propyl- (CA INDEX NAME)



L62 ANSWER 6 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:228920 HCAPLUS Full-text
 DOCUMENT NUMBER: 142:297927
 TITLE: Pteridine derivatives for treating TNF-alpha related disorders
 INVENTOR(S): Herdewijn, Piet; Waer, Mark; De Jonghe, Steven Cesar
 Alfons; Yuan, Lin; El Hassane, Sefrioui
 PATENT ASSIGNEE(S): 4 AZA Bioscience NV, Belg.
 SOURCE: Brit. UK Pat. Appl., 72 pp.
 CODEN: BAXXDU
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2405793	A	20050316	GB 2003-21384	20030912 <--
AU 2004271721	A1	20050324	AU 2004-271721	20040913 <--
CA 2534549	A1	20050324	CA 2004-2534549	20040913 <--
WO 2005025574	A2	20050324	WO 2004-EP10198	20040913 <--
WO 2005025574	A3	20050630		
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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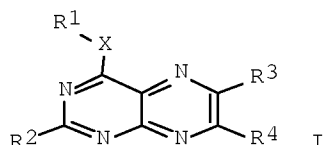
Serial No.:10/584,996

JP 2007533617	T	20071122	JP 2006-525783	20040913 <--
US 2007004721	A1	20070104	US 2006-595161	20060310 <--
PRIORITY APPLN. INFO.:			GB 2003-21384	A 20030912 <--
			GB 2004-8955	A 20040422
			WO 2004-EP10198	W 20040913

OTHER SOURCE(S): MARPAT 142:297927

ED Entered STN: 16 Mar 2005

GI



AB This invention relates to the use of a group of pteridine derivs. I (X = O, or S(O)m wherein m is an integer from 0 to 2, or a substituted amine; R1 = alkyl, alkynyl, cycloalkyl, aryl heterocycle, halogen, alkoxy etc.; R2 = amino, acylamino, thioacylamino, carbamoyl, thiocarbamoyl, ureido, thioedio, sulfon-amido, hydroxylamino, alkoxyamino, thioalkylamino, mercaptoamino, hydrazino, alkylhydrazino, aryl, heterocycle, etc.; R3, R4 = H, halogen, alkyl, alkenyl, alkynyl, alkyl, carboxy, acetoxy, alkoxy, oxyheterocyclic, etc.) their pharmaceutically acceptable salts, N-oxides, solvates, dihydro- and tetrahydro derivs. and enantiomers, for the manufacture of a medicament for the prevention or treatment of TNF- α related disorders. Thus, 2-amino-4-isopropoxypteridine was cooled in trifluoroacetic acid and treated with 35% H2O2 to give 2-amino-4-isopropoxypteridine-N8-oxide which had a IC50 value of 4.0 μ M against TNF- α . The conditions treated may be septic or endotoxic shock, toxic effects of radiotherapy, TNF- α or chemotherapeutic agents, or cachexia.

IT 247913-51-5P 247913-54-8P 247913-56-0P
278799-96-5P 278800-02-5P 278800-27-4P
278800-29-6P 847832-39-7P 847832-40-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pteridine derivs. for treating TNF-alpha related disorders)

RN 247913-51-5 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4-dimethyl-6-phenyl- (CA INDEX NAME)

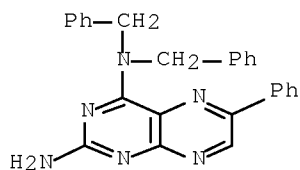


RN 247913-54-8 HCAPLUS

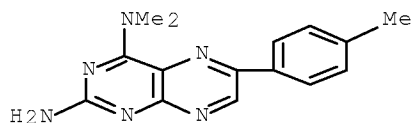
CN 2,4-Pteridinediamine, N4,N4-diethyl-6-phenyl- (CA INDEX NAME)



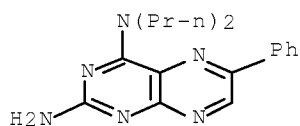
RN 247913-56-0 HCAPLUS
CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



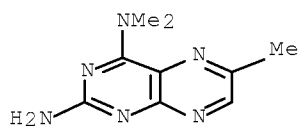
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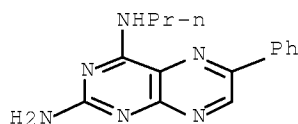
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CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-dipropyl- (CA INDEX NAME)



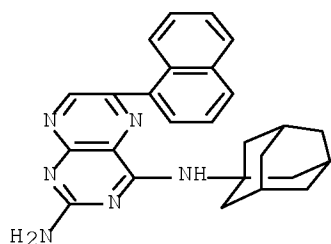
RN 278800-27-4 HCAPLUS
CN 2,4-Pteridinediamine, N4,N4,6-trimethyl- (CA INDEX NAME)



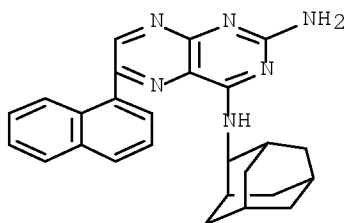
RN 278800-29-6 HCAPLUS
CN 2,4-Pteridinediamine, 6-phenyl-N4-propyl- (CA INDEX NAME)



RN 847832-39-7 HCAPLUS
CN 2,4-Pteridinediamine, 6-(1-naphthalenyl)-N4-tricyclo[3.3.1.1^{3,7}]dec-1-yl- (CA INDEX NAME)



RN 847832-40-0 HCAPLUS
CN 2,4-Pteridinediamine, 6-(1-naphthalenyl)-N4-tricyclo[3.3.1.1^{3,7}]dec-2-yl- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 7 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:216684 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 142:298130
TITLE: Preparation and immunosuppressive effects of pteridine derivatives
INVENTOR(S): Waer, Mark Jozef Albert; Herdewijn, Piet Andre Maurits Maria; Pfleiderer, Wolfgang Eugen; Marchand, Arnaud Didier Marie; De Jonghe, Steven Cesar Alfons
PATENT ASSIGNEE(S): 4 Aza Bioscience NV, Belg.
SOURCE: PCT Int. Appl., 100 pp.

Serial No.:10/584,996

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

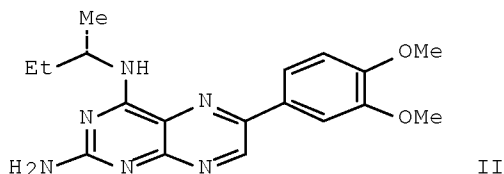
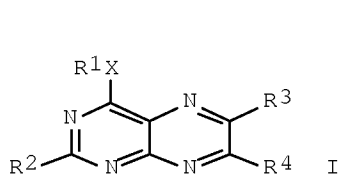
LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005021003	A2	20050310	WO 2004-BE124	20040827 <--
WO 2005021003	A3	20050609		
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004077859	A1	20040422	US 2003-651604	20030829 <--
US 7276506	B2	20071002		
GB 2413324	A	20051026	GB 2004-8955	20040422
AU 2004267885	A1	20050310	AU 2004-267885	20040827 <--
CA 2534151	A1	20050310	CA 2004-2534151	20040827 <--
EP 1658081	A2	20060524	EP 2004-761485	20040827 <--
EP 1658081	B1	20071024		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
JP 2007533610	T	20071122	JP 2006-524183	20040827
US 2006287314	A1	20061221	US 2006-595126	20060227 <--
PRIORITY APPLN. INFO.:				
			US 2003-651604	A 20030829 <--
			GB 2004-8955	A 20040422
			US 1998-113989P	P 19981228 <--
			WO 1999-EP10320	W 19991228 <--
			US 2001-869468	B2 20011010 <--
			WO 2004-BE124	W 20040827
OTHER SOURCE(S): CASREACT 142:298130; MARPAT 142:298130				
ED Entered STN: 11 Mar 2005				
GI				



AB This invention relates to a group of trisubstituted and tetrasubstituted pteridine derivs. I [X = O, S(O)m, NZ; m = 0-2; Z = H, OH, R₁ or NZ = heterocyclic group; R₁ = (un)substituted C₁-7 alkyl, C₂-7 alkenyl, C₂-7 alkynyl, C₃-10 cycloalkyl, C₃-10 cycloalkenyl, aryl, alkylaryl, arylalkyl, heterocyclyl, heterocycloalkyl, etc.; R₂ = amino, acylamino, thioacylamino,

carbamoyl, thiocarbamoyl, ureido, thioureido, sulfonamido, hydroxylamino, alkoxyamino, thioalkylamino, hydrazino, etc.; R3 = F, Cl, Br, iodo, any group R1; R4 = H, halo, any group R1], their pharmaceutically acceptable salts, N-oxides, solvates, dihydro and tetrahydro derivs. and enantiomers, possessing unexpectedly desirable pharmaceutical properties, in particular which are highly active immunosuppressive agents, and as such are useful in the treatment in transplant rejection and/or in the treatment of certain inflammatory diseases. These compds. are also useful in preventing or treating cardiovascular disorders, allergic conditions, disorders of the central nervous system and cell proliferative disorders. Thus, (S)-sec-butylpteridine II (prepared in several steps from 2,6-diamino-5-hydroxypyrimidine, 3,4-dimethoxyphenylglyoxal oxime, and (S)-sec-butylamine) showed an IC50 of 0.2 μ mol/L in a mixed lymphocyte suppression assay and an IC50 value of 0.3 μ M in a TNF- α suppression assay.

IT 247913-51-5P 247913-54-8P 247913-56-0P
278799-96-5P 278800-02-5P 278800-20-7P
278800-22-9P 278800-24-1P 278800-27-4P
278800-29-6P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and immunosuppressive effects of pteridine derivs.)

RN 247913-51-5 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4-dimethyl-6-phenyl- (CA INDEX NAME)



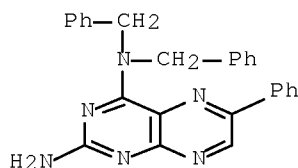
RN 247913-54-8 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4-diethyl-6-phenyl- (CA INDEX NAME)



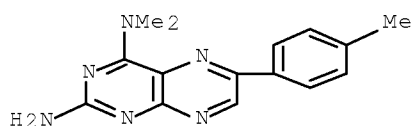
RN 247913-56-0 HCAPLUS

CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



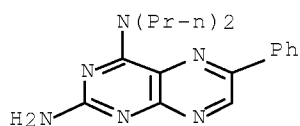
RN 278799-96-5 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4-dimethyl-6-(4-methylphenyl)- (CA INDEX NAME)



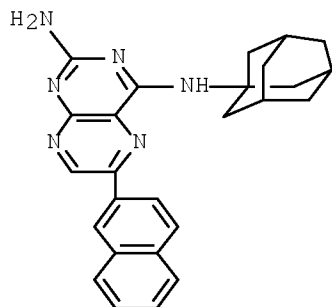
RN 278800-02-5 HCAPLUS

CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-dipropyl- (CA INDEX NAME)



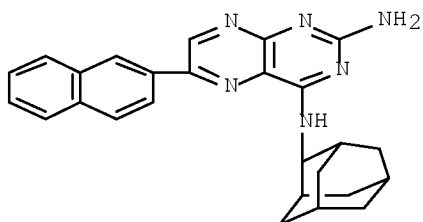
RN 278800-20-7 HCAPLUS

CN 2,4-Pteridinediamine, 6-(2-naphthalenyl)-N4-tricyclo[3.3.1.1^{3,7}]dec-1-yl- (CA INDEX NAME)

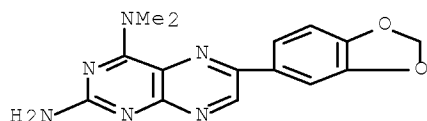


RN 278800-22-9 HCAPLUS

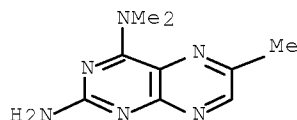
CN 2,4-Pteridinediamine, 6-(2-naphthalenyl)-N4-tricyclo[3.3.1.1^{3,7}]dec-2-yl- (CA INDEX NAME)



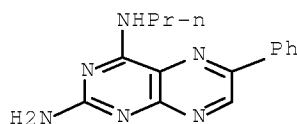
RN 278800-24-1 HCAPLUS
CN 2,4-Pteridinediamine, 6-(1,3-benzodioxol-5-yl)-N4,N4-dimethyl- (CA INDEX NAME)



RN 278800-27-4 HCAPLUS
CN 2,4-Pteridinediamine, N4,N4,6-trimethyl- (CA INDEX NAME)



RN 278800-29-6 HCAPLUS
CN 2,4-Pteridinediamine, 6-phenyl-N4-propyl- (CA INDEX NAME)

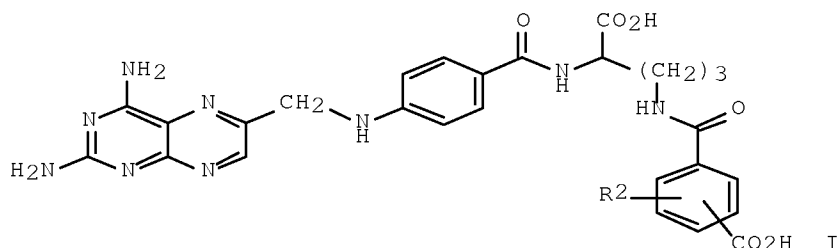


L62 ANSWER 8 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:122801 HCAPLUS Full-text
DOCUMENT NUMBER: 142:198349
TITLE: Preparation of ornithine derivative ammonium salts for treating inflammatory diseases
INVENTOR(S): Rosenwald, Lindsay A.; Weiser, Michael; Stein, Jason; Serbin, Jeff
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2005032807	A1	20050210	US 2003-634811	20030806 <--
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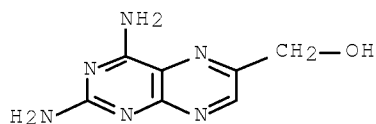
Serial No.:10/584,996

CA 2534558 A1 20050224 CA 2004-2534558 20040223 <--
WO 2005016350 A1 20050224 WO 2004-US5357 20040223 <--
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CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1660093 A1 20060531 EP 2004-713788 20040223 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK
JP 2007501227 T 20070125 JP 2006-522537 20040223 <--
KR 2007029101 A 20070313 KR 2006-702558 20060206 <--
PRIORITY APPLN. INFO.: US 2003-634811 A 20030806 <--
WO 2004-US5357 W 20040223
OTHER SOURCE(S): CASREACT 142:198349; MARPAT 142:198349
ED Entered STN: 11 Feb 2005
GI

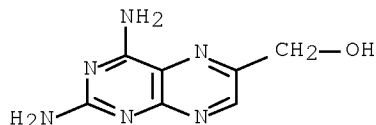


AB The invention relates to pharmaceutically-active ornithine compds., particularly to pharmaceutically-acceptable ammonium salts of N α -(4-amino-4-deoxypteroyl)-L-ornithine N δ -acyl derivs. I [R2 is H, alk(en)(yn)yl, cycloalkyl, alkoxy, Cl, F, OH or CO2H (up to four groups)]. Thus, N α -(4-amino-4-deoxypteroyl)-N δ -hemiphthaloyl- L-ornithine ammonium salt was prepared by a multistep sequence starting with reaction of tetraaminopyrimidine sulfate with L-cysteine HCl salt and dihydroxyacetone dimer. The ammonium salts provided by the invention exhibit chemical stability superior to that of corresponding acidic N δ -acyl derivs. of N α -(4-amino-4-deoxypteroyl)-L-ornithine compds.

IT 945-24-4P 100462-86-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of ornithine derivative ammonium salts for treating inflammatory diseases)
RN 945-24-4 HCAPLUS
CN 6-Pteridinemethanol, 2,4-diamino- (CA INDEX NAME)



RN 100462-86-0 HCAPLUS
 CN 6-Pteridinemethanol, 2,4-diamino-, hydrochloride (9CI) (CA INDEX NAME)



●x HCl

L62 ANSWER 9 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:331825 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:350561
 TITLE: Immunosuppressive effects of pteridine derivatives and pharmaceutical compositions containing them
 INVENTOR(S): Waer, Mark Jozef Albert; Herdewijn, Piet Andre Maurits Maria; Pfleiderer, Wolfgang Eugen
 PATENT ASSIGNEE(S): 4 Aza Bioscience NV, Belg.
 SOURCE: U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S. Ser. No. 869,468, abandoned.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004077859	A1	20040422	US 2003-651604	20030829 <--
US 7276506	B2	20071002		
WO 2000039129	A1	20000706	WO 1999-EP10320	19991228 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2004267885	A1	20050310	AU 2004-267885	20040827 <--
CA 2534151	A1	20050310	CA 2004-2534151	20040827 <--
WO 2005021003	A2	20050310	WO 2004-BE124	20040827 <--
WO 2005021003	A3	20050609		
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Serial No.:10/584,996

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
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SN, TD, TG

EP 1658081 A2 20060524 EP 2004-761485 20040827 <--
EP 1658081 B1 20071024

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2006189620 A1 20060824 US 2006-275601 20060118 <--
US 2006287314 A1 20061221 US 2006-595126 20060227 <--

PRIORITY APPLN. INFO.:
US 1998-113989P P 19981228 <--
WO 1999-EP10320 W 19991228 <--
US 2001-869468 B2 20011010 <--
US 2003-651604 A 20030829 <--
GB 2004-8955 A 20040422
WO 2004-BE124 W 20040827

OTHER SOURCE(S): MARPAT 140:350561

ED Entered STN: 23 Apr 2004

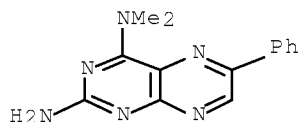
AB This invention relates to a group of trisubstituted and tetrasubstituted
pteridine derivs., their pharmaceutically acceptable salts, N-oxides,
solvates, dihydro- and tetrahydroderivatives and enantiomers, possessing
unexpectedly desirable pharmaceutical properties, in particular which are
highly active immunosuppressive agents, and as such are useful in the
treatment in transplant rejection and/or in the treatment of certain
inflammatory diseases. These compds. are also useful in preventing or
treating cardiovascular disorders, allergic conditions, disorders of the
central nervous system and cell proliferative disorders. The pteridine
derivs. (preparation given) inhibited the mixed lymphocyte reaction and
reduced T cell proliferation in the CD3 and CD28 assay.

IT 247913-51-5P 247913-54-8P 247913-56-0P
278799-96-5P 278800-02-5P 278800-27-4P
278800-29-6P

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
(immunosuppressant pteridine derivs. and compns.)

RN 247913-51-5 HCAPLUS

CN 2,4-Pteridinediamine, N4,N4-dimethyl-6-phenyl- (CA INDEX NAME)

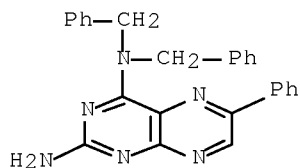


RN 247913-54-8 HCAPLUS

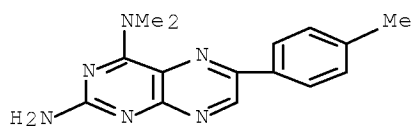
CN 2,4-Pteridinediamine, N4,N4-diethyl-6-phenyl- (CA INDEX NAME)



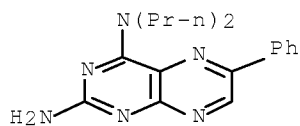
RN 247913-56-0 HCAPLUS
 CN 2,4-Pteridinediamine, 6-phenyl-N4,N4-bis(phenylmethyl)- (CA INDEX NAME)



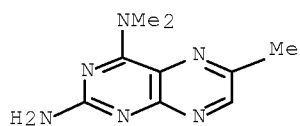
RN 278799-96-5 HCAPLUS
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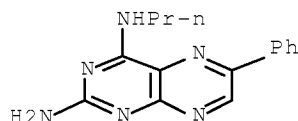
RN 278800-02-5 HCAPLUS
 CN 2,4-Pteridinediamine, N4,N4-dipropyl-6-phenyl- (CA INDEX NAME)



RN 278800-27-4 HCAPLUS
 CN 2,4-Pteridinediamine, N4,N4,6-trimethyl- (CA INDEX NAME)



RN 278800-29-6 HCAPLUS
 CN 2,4-Pteridinediamine, 6-phenyl-N4-propyl- (CA INDEX NAME)



L62 ANSWER 10 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:312329 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:327052
 TITLE: Pharmaceutically active ornithine derivatives,
 ammonium salts thereof and methods of making same
 INVENTOR(S): Rosowsky, Andre; Bader, Henry; Blumbergs, Peter; Lin,
 Ming-Teh
 PATENT ASSIGNEE(S): Dana-Farber Cancer Institute, USA; Ash Stevens, Inc.
 SOURCE: U.S. Pat. Appl. Publ., 19 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004072837	A1	20040415	US 2003-412279	20030414 <--
US 6989386	B2	20060124		
AU 2004232668	A1	20041104	AU 2004-232668	20040223 <--
CA 2522538	A1	20041104	CA 2004-2522538	20040223 <--
WO 2004094427	A1	20041104	WO 2004-US5356	20040223 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1638973	A1	20060329	EP 2004-713766	20040223 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
BR 2004009441	A	20060418	BR 2004-9441	20040223 <--
JP 2006523689	T	20061019	JP 2006-508804	20040223 <--
MX 2005PA10957	A	20060418	MX 2005-PA10957	20051012 <--
NO 2005005311	A	20060110	NO 2005-5311	20051110 <--
IN 2005CN02989	A	20070727	IN 2005-CN2989	20051114 <--
US 2006079531	A1	20060413	US 2005-286126	20051122 <--
US 2007219204	A1	20070920	US 2006-417479	20060427 <--
PRIORITY APPLN. INFO.:			US 2002-376615P	P 20020430 <--
			US 2003-412279	A 20030414 <--
			WO 2004-US5356	W 20040223
			US 2005-286126	A1 20051122
OTHER SOURCE(S):		MARPAT 140:327052		

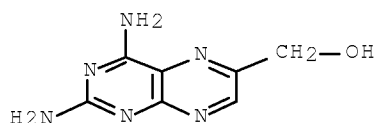
ED Entered STN: 16 Apr 2004

AB The present invention relates to pharmaceutically active ornithine compds., particularly to pharmaceutically acceptable ammonium salts of N δ -acyl derivs. of N α -(4-amino-4-deoxypteroyl)-L-ornithine compds.; and methods of treatment and pharmaceutical compns. that utilize or comprise one or more of such ammonium salts. The ammonium salts provided by the invention exhibit superior chemical stability than corresponding acidic N δ -acyl derivs. of N α -(4-amino-4-deoxypteroyl)-L-ornithine compds. Thus, N δ -(4-amino-4-deoxypteroyl)N δ -hemipthaloyl-L-ornithine ammonium salt was prepd by the reaction of N δ -phthaloyl-L-ornithine with ammonium hydroxide solution as a yellow powder (yield = 93%).

IT 945-24-4, 2,4-Diamino-6-hydroxymethylPteridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (pharmaceutically active ornithine derivs., ammonium salts thereof and methods of making same)

RN 945-24-4 HCAPLUS

CN 6-Pteridinemethanol, 2,4-diamino- (CA INDEX NAME)



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 100 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:487712 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 103:87712

ORIGINAL REFERENCE NO.: 103:14085a,14088a

TITLE: 2-(2,4-Diamino-6-pteridinyl)vinylbenzene derivatives

INVENTOR(S): Piper, James R.; Montgomery, John A.

PATENT ASSIGNEE(S): Southern Research Institute, Australia

SOURCE: Pat. Specif. (Aust.), 11 pp.
 CODEN: ALXXAP

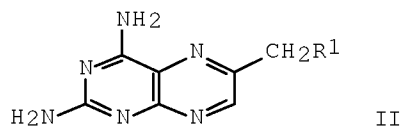
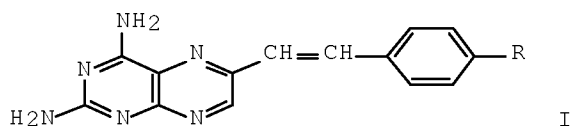
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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AU 541315	B2	19850103	AU 1981-73914	19810807 <--
AU 8173914	A	19811112		
PRIORITY APPLN. INFO.:			AU 1981-73914	19810807 <--
OTHER SOURCE(S):	CASREACT	103:87712		
ED Entered STN:	22 Sep 1985			
GI				



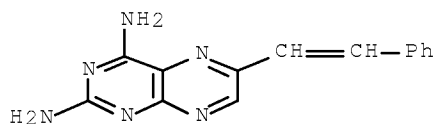
AB The title compds. I (R = H, CO₂H, alkoxycarbonyl, esterified glutamyl) were prepared. Thus, bromomethylpteridine II (R₁ = Br) was treated with PPh₃ to give II (R₁ = P+Ph₃ Br-) which was converted to the ylide and treated with di-Et 4-formylbenzoyl-L-glutamate to give I [R = CONHCH(CO₂Et)CH₂CH₂CO₂Et]. The latter compound was hydrogenated to 10-deazaaminopterin.

IT 50691-66-2F

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 50691-66-2 HCAPLUS

CN 2,4-Pteridinediamine, 6-(2-phenylethenyl)- (CA INDEX NAME)



L62 ANSWER 101 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:209260 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 102:209260

ORIGINAL REFERENCE NO.: 102:32733a, 32736a

TITLE: Ammonia and methane chemical ionization mass spectra of methotrexate and its amide and ester analogs

AUTHOR(S): Cheung, H. T. Andrew; Tattam, Bruce N.; Antonjuk, David J.; Boadle, Deborah K.

CORPORATE SOURCE: Dep. Pharm., Univ. Sydney, Sydney, Australia

SOURCE: Biomedical Mass Spectrometry (1985), 12(1), 11-18

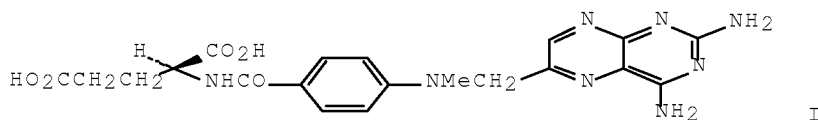
CODEN: BMSYAL; ISSN: 0306-042X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 15 Jun 1985

GI



AB The use of chemical-ionization mass spectrometry for the characterization of analogs of methotrexate (I) [59-05-2] was studied. With CH₄ [74-82-8] as reactant gas, abundant [MH]⁺ ions were generally not produced. However, with NH₃, especially in conjunction with thermal desorption from a Pt wire, significant amts. of [MH]⁺ ions were formed by I the α- [71074-47-0], γ- [64801-56-5] and diamide [62703-30-4] analogs, and a series of α- and γ- monoalkylamide derivs. The tert-Bu esters of the various monoamides behaved similarly to the corresponding monoamides, except for the ready loss of isobutylene. Fragment ions from both CH₄ and NH₃ chemical ionization were formed by cleavages benzylic to the pteridine ring, by bond breakage at the amide bond between the aminobenzoyl and glutamyl moieties, and by fragmentations on both sides of this amide bond. Fragment ions from these processes, in conjunction with further disintegration of the glutamyl moiety, are diagnostic of the structures of the pteridine, aminobenzoyl and glutamyl moieties of the analogs. Examples of application to structural determination are given.

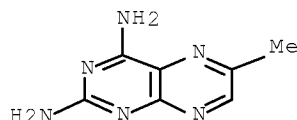
IT 708-74-7

RL: PRP (Properties)

(chemical-ionization mass spectroscopy of, ammonia or methane reactants in)

RN 708-74-7 HCAPLUS

CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)



L62 ANSWER 102 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:167139 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 102:167139

ORIGINAL REFERENCE NO.: 102:26301a,26304a

TITLE: Methotrexate analogs. 25. Chemical and biological studies on the γ-tert-butyl esters of methotrexate and aminopterin

AUTHOR(S): Rosowsky, Andre; Freisheim, James H.; Bader, Henry; Forsch, Ronald A.; Susten, Sandra A.; Cucchi, Carol A.; Frei, Emil, III

CORPORATE SOURCE: Dana-Farber Cancer Inst., Harvard Med. Sch., Boston, MA, 02115, USA

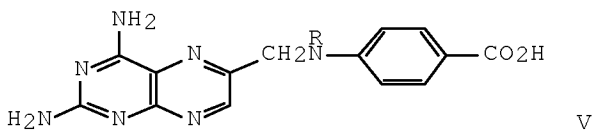
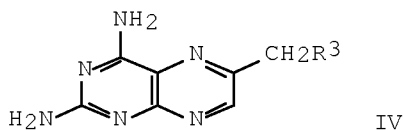
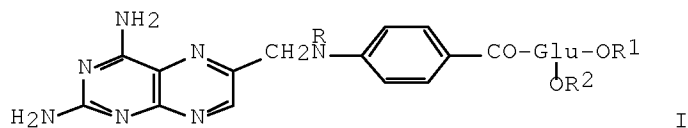
SOURCE: Journal of Medicinal Chemistry (1985), 28(5), 660-7

CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 102:167139
 ED Entered STN: 18 May 1985
 GI



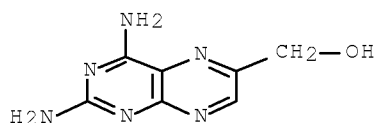
AB γ -tert-Bu aminopterin (I; R = R₁ = H, R₂ = CMe₃) (II) was prepared, and new routes to the known γ -tert-Bu methotrexate (I; R = Me, R₁ = H, R₂ = CMe₃) (III) were developed. Thus, pteridine IV (R₃ = OH) was brominated by Br₂/PPh₃ to give IV (R₃ = Br), which was treated in situ with p-H₂NC₆H₄CO₂H to give pterioic acid V (R = H), which was formylated to give V (R = CHO). The latter was condensed with H-Glu(OCMe₃)-OMe.HCl by ClCO₂CH₂CHMe₂ in DMF containing Et₃N to give I (R = CHO, R₁ = Me, R₂ = CMe₃), which was hydrolyzed and then deformylated to give II. II was also prepared by treating IV.HBr (R₃ = Br) with p-RNHC₆H₄CO-Glu(OCMe₃)-OR₁ (VI, R = R₁ = H) in AcNMe₂ containing Me₂CHNEt₂. III was prepared by brominating IV (R₃ = OH), treating the resulting IV (R₃ = Br) with VI (R = R₁ = Me), and hydrolyzing the resulting I (R = R₁ = Me, R₂ = CMe₃). The inhibitory effects of II on the activity of dihydrofolate reductase (DHFR) from L1210 murine leukemia cells, the growth of 4210 cells and CEM human leukemic lymphoblasts in suspension culture, and the growth of human squamous cell carcinoma of the head and neck in monolayer culture were compared with the effects of III and the parent acids aminopterin (I, R-R₂ = H) and methotrexate (I, R = Me, R₁ = R₂ = H). The activity of II was close to that of III in the DHFR inhibition assay, but II was more potent than III against cells in culture and against L1210 leukemia in mice.

IT 945-24-4P

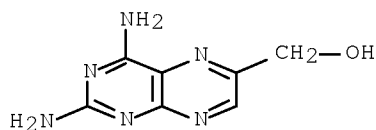
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and bromination of)

RN 945-24-4 HCAPLUS

CN 6-Pteridinemethanol, 2,4-diamino- (CA INDEX NAME)

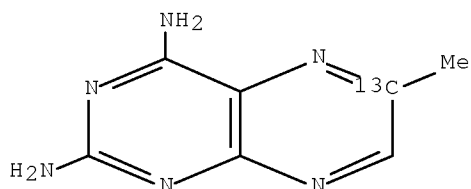


IT 73978-41-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and neutralization of)
 RN 73978-41-3 HCAPLUS
 CN 6-Pteridinemethanol, 2,4-diamino-, hydrochloride (1:1) (CA INDEX NAME)

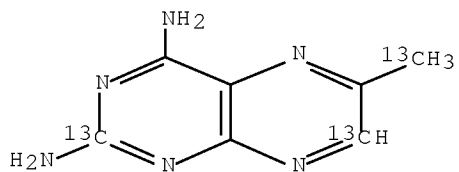


● HCl

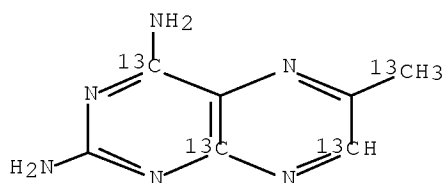
L62 ANSWER 103 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1985:6425 HCAPLUS Full-text
 DOCUMENT NUMBER: 102:6425
 ORIGINAL REFERENCE NO.: 102:1167a,1170a
 TITLE: Multi-carbon-13-labeled 2,4-diamino-6-methylpteridine
 AUTHOR(S): Cheung, H. T. A.; Gray, P. G.
 CORPORATE SOURCE: Dep. Pharm., Univ. Sydney, Sydney, Australia
 SOURCE: Journal of Labelled Compounds and Radiopharmaceuticals
 (1984), 21(5), 471-83
 CODEN: JLCRD4; ISSN: 0362-4803
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 Jan 1985
 AB Samples of 2,4-diamino-6-methylpteridine (I) specifically labeled with ¹³C at
 1 or more positions were prepared and characterized by ¹H and ¹³C NMR. E.g.,
 treatment of 2,4,5,6-tetraaminopyrimidine with NaHSO₃ and Me¹³COCHCl₂ under
 pH-controlled conditions gave I-6-¹³C in 41% yield.
 IT 93665-13-5P 93665-14-6P 93665-15-7P
 93665-16-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 93665-13-5 HCAPLUS
 CN 2,4-Pteridinediamine-6-¹³C, 6-methyl- (9CI) (CA INDEX NAME)



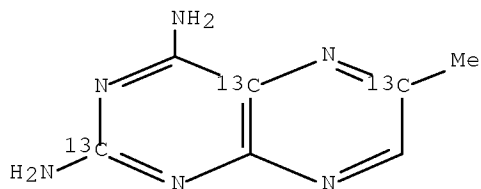
RN 93665-14-6 HCAPLUS
 CN 2,4-Pteridinediamine-2,7-¹³C₂, 6-(methyl-¹³C)- (9CI) (CA INDEX NAME)



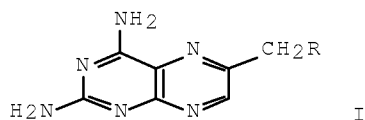
RN 93665-15-7 HCAPLUS
CN 2,4-Pteridinediamine-4,7,8a-13C3, 6-(methyl-13C)- (9CI) (CA INDEX NAME)



RN 93665-16-8 HCAPLUS
CN 2,4-Pteridinediamine-2,4a,6-13C3, 6-methyl- (9CI) (CA INDEX NAME)



L62 ANSWER 104 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:630476 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 101:230476
ORIGINAL REFERENCE NO.: 101:35001a,35004a
TITLE: Synthesis of 2,4-diamino-6-substituted pteridine
AUTHOR(S): Shey, Chun Feng; Chen, Chao Tung; Horng, Jhy Ming;
Wang, Cheng Hsia
CORPORATE SOURCE: Dep. Chem., Natl. Taiwan Norm. Univ., Taipei, Taiwan
SOURCE: Shida Xuebao (Taipei) (1984), 29, 631-43
CODEN: STHPD8; ISSN: 0583-0249
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 22 Dec 1984
GI

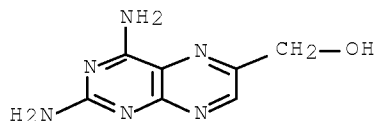


AB Title compds. I (R = Cl, OH), intermediates for methotrexate, were prepared
Thus, cyclocondensation of 2,4,5,6-tetraaminopyrimidine with CO(CH2OH)2 gave I
(R = OH) whereas cyclocondensation of 2-amino-3-cyano-5- chloromethylpyrazine
with guanidine gave I (R = Cl).

IT 945-24-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and chlorination of)

RN 945-24-4 HCAPLUS

CN 6-Pteridinemethanol, 2,4-diamino- (CA INDEX NAME)



L62 ANSWER 105 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:622096 HCAPLUS Full-text

DOCUMENT NUMBER: 101:222096

ORIGINAL REFERENCE NO.: 101:33507a,33510a

TITLE: Functional group contributions to drug-receptor interactions

AUTHOR(S): Andrews, P. R.; Craik, D. J.; Martin, J. L.

CORPORATE SOURCE: Victorian Coll. Pharm. Ltd., Parkville, 3052, Australia

SOURCE: Journal of Medicinal Chemistry (1984), 27(12), 1648-57
CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 22 Dec 1984

AB To overcome the difficulties in estimating the potential bond strengths involved in the interaction between a drug and a reasonable matched receptor, 200 drugs and enzyme inhibitors chosen on the basis of their apparent tight binding to their corresponding receptor sites, were used to provide a statistical estimate of the strength of noncovalent bonds associated with each functional groups in an average drug-receptor environment. Values are presented to determine the goodness of fit of a drug to its receptor by comparing the observed binding constant to the average binding energy calculated by summing the intrinsic binding energies of the component groups and then subtracting 2 entropy related terms. Drugs such as diazepam [439-14-5] that match their receptors well have a measured binding energy exceeding the calculated average value, whereas others such as buprenorphine [52485-79-7] who match their receptor less than the average have binding energies less the calculated average value. In addition the binding energies of 3 central

Serial No.:10/584,996

nervous system active drugs and representative amino acids within a polypeptide mol. are also given. General principles for the application of intrinsic binding energies in drug design and structure-activity relations are discussed.

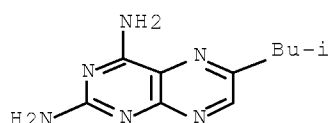
IT 51395-54-1 51583-02-9

RL: PROC (Process)

(binding of, with receptors)

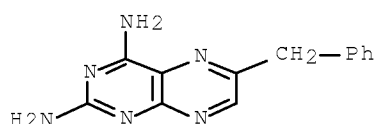
RN 51395-54-1 HCAPLUS

CN 2,4-Pteridinediamine, 6-(2-methylpropyl)- (CA INDEX NAME)



RN 51583-02-9 HCAPLUS

CN 2,4-Pteridinediamine, 6-(phenylmethyl)- (CA INDEX NAME)



L62 ANSWER 106 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:571289 HCAPLUS Full-text

DOCUMENT NUMBER: 101:171289

ORIGINAL REFERENCE NO.: 101:25911a,25914a

TITLE: Pteridines

PATENT ASSIGNEE(S): Wellcome Foundation Ltd., UK

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

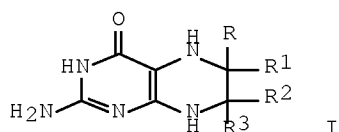
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59076086	A	19840428	JP 1983-172861	19830919 <--
JP 05033229	B	19930519		
DK 8304260	A	19840321	DK 1983-4260	19830919 <--
AU 8319256	A	19840329	AU 1983-19256	19830919 <--
AU 572792	B2	19880519		
EP 108890	A2	19840523	EP 1983-109291	19830919 <--
EP 108890	A3	19851002		
EP 108890	B1	19881207		
R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
ZA 8306957	A	19850424	ZA 1983-6957	19830919 <--
CA 1288099	C	19910827	CA 1983-437101	19830920 <--
DK 8401591	A	19850113	DK 1984-1591	19840319 <--

Serial No.:10/584,996

DK 161326	B	19910624		
DK 161326	C	19911209		
US 4587340	A	19860506	US 1984-620152	19840613 <--
US 4701455	A	19871020	US 1985-747671	19850621 <--
US 4665182	A	19870512	US 1985-799285	19851119 <--
PRIORITY APPLN. INFO.:			GB 1982-26688	A 19820920 <--
			GB 1983-18833	A 19830712 <--
			US 1983-533785	A1 19830919 <--
			US 1983-533786	A 19830919 <--
OTHER SOURCE(S):	MARPAT	101:171289		
ED Entered STN:	10 Nov 1984			
GI				

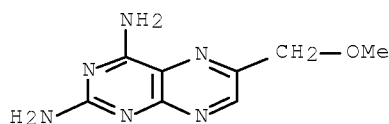


AB The title compds. I [R,R1 = H, (substituted) alkyl; R2,R3 = H, alkyl] were prepared Thus, 2,4-diamino-6-(methoxymethyl)pteridine, obtained via reaction of 2-amino-3-cyano-5-(methoxymethyl)pyrazine with formamidine, was hydrolyzed in 1 N NOH at 70° for 3 h to give 83% 2-amino-6-(methoxymethyl)-4(3H)-pteridine, hydrogenation of which gave 85% I (R = MeOCH2, R1-R3 = H). The antidepressant, antihypotensive, and anti-Parkinsonism activities of I were measured by their effects on various enzymes.

IT 40110-13-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and hydrazolysis of)

RN 40110-13-2 HCAPLUS

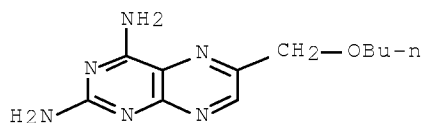
CN 2,4-Pteridinediamine, 6-(methoxymethyl)- (CA INDEX NAME)



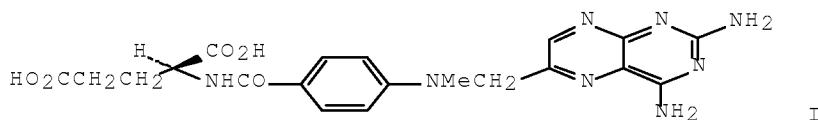
IT 92530-52-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 92530-52-4 HCAPLUS

CN 2,4-Pteridinediamine, 6-(butoxymethyl)- (CA INDEX NAME)



L62 ANSWER 107 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1983:590715 HCAPLUS Full-text
 DOCUMENT NUMBER: 99:190715
 ORIGINAL REFERENCE NO.: 99:29291a,29294a
 TITLE: Photosensitization by methotrexate photoproducts
 AUTHOR(S): Chahidi, C.; Morliere, P.; Aubailly, M.; Dubertret, L.; Santus, R.
 CORPORATE SOURCE: Lab. Phys. Chim. Adapt. Biol., Mus. Natl. Hist. Nat., Paris, 75231, Fr.
 SOURCE: Photochemistry and Photobiology (1983), 38(3), 317-22
 CODEN: PHCBAP; ISSN: 0031-8655
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 May 1984
 GI



AB Photoproducts induced upon excitation of methotrexate (I) by UV light have been separated by ion-exchange chromatog. They include 2,4-diamino-6-pteridinecarboxylic acid, 2,4-diamino-6-pteridinecarboxaldehyde, and other unidentified pteridine derivs. The same photoproducts can be also formed upon photodynamic reaction using hematoporphyrin as photosensitizer. In O-saturated aqueous solns. (pH.apprx.7), I photoproducts sensitize the oxidation of histidine and tryptophan by UV light by a process involving singlet O. In aqueous solns. containing albumin or in human serum, the same photoproducts are formed from free I but not from albumin-bound I. In the latter case, the results may suggest that I covalently binds to albumin upon excitation with UV light either in the absence or in presence of O. These results could explain the photosensitization accompanying cancer chemotherapy with high dose I and also the synergistic effects of psoralen + UVA + low dose I in psoriasis therapy.

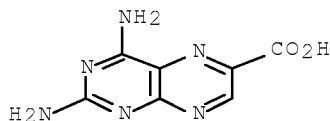
IT 716-74-5 4261-17-0

RL: BIOL (Biological study)

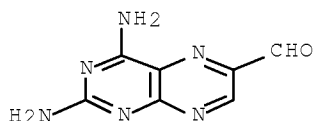
(as methotrexate photoproduct, photosensitization by)

RN 716-74-5 HCAPLUS

CN 6-Pteridinecarboxylic acid, 2,4-diamino- (CA INDEX NAME)



RN 4261-17-0 HCAPLUS
 CN 6-Pteridinecarboxaldehyde, 2,4-diamino- (CA INDEX NAME)



L62 ANSWER 108 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1983:454148 HCAPLUS Full-text
 DOCUMENT NUMBER: 99:54148
 ORIGINAL REFERENCE NO.: 99:8473a,8476a
 TITLE: Separation of triphenylphosphine oxide from methotrexate ester and purification of this ester
 INVENTOR(S): Ellard, James A.; Webster, James A.
 PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
 SOURCE: U. S. Pat. Appl., 10 pp. Avail. NTIS Order No. PAT-APPL-6-329 869
 CODEN: XAXXAV
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 329869	A0	19830318	US 1981-329869	19811211 <--
US 4421913	A	19831220		
US 143129	A0	19810327	US 1980-143129	19800423 <--
PRIORITY APPLN. INFO.:			US 1980-143129	19800423 <--
OTHER SOURCE(S):	CASREACT 99:54148			

ED Entered STN: 12 May 1984

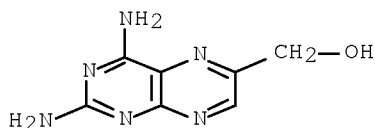
AB The Ph3PO generated by hydrolysis of the protective groups in the synthesis of methotrexate was separated from the reaction mixture by extraction with toluene or BTX-type solvents. Also, the methotrexate ester was purified by a procedure which involved filtering an acidic EtOH solution of the ester.

IT 76145-91-0

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with di-Et [(methylamino)benzoyl]glutamine)

RN 76145-91-0 HCAPLUS

CN 6-Pteridinemethanol, 2,4-diamino-, hydrobromide (9CI) (CA INDEX NAME)



●x HBr

L62 ANSWER 109 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1983:224048 HCAPLUS Full-text

DOCUMENT NUMBER: 98:224048

ORIGINAL REFERENCE NO.: 98:33931a,33934a

TITLE: Electrochemistry of methotrexate. Part I.
Characteristics of reduction

AUTHOR(S): Gurira, R. C.; Bowers, L. D.

CORPORATE SOURCE: Dep. Lab. Med. Pathol., Univ. Minnesota, Minneapolis,
MN, 55455, USA

SOURCE: Journal of Electroanalytical Chemistry and Interfacial
Electrochemistry (1983), 146(1), 109-22
CODEN: JEIEBC; ISSN: 0022-0728

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 May 1984

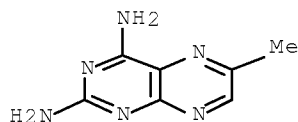
AB The electrochem. reduction of methotrexate (MTX) [59-05-2] was studied in the pH range of 2 to 11. Methotrexate exhibits 3 two-electron/two-proton reduction steps in neutral and acidic media. Based on the results of cyclic voltammetry and high performance liquid chromatog. anal. of the products formed in controlled potential electrolysis, the 1st reduction produces 5,8-dihydro-MTX [86011-02-1] which undergoes either a heretofore unreported proton-dependent cleavage or proton-dependent tautomerization to 7,8-dihydro-MTX [14009-31-5]. The rate constant for the tautomerization was pH dependent and varied from 0.41 s⁻¹ to 0.019 s⁻¹ in the pH range of 3.5 to 7.6. The 2nd reduction cleaves the C(9)-N(10) bond of the 7,8--dihydro-MTX. The final reduction produces a 5,6,7,8-tetrahydro derivative of the substituted pteridine. In alkaline media, a single two-electron/two- proton reduction is observed due to the very slow tautomerization process required to produce the reactant for subsequent redns.

IT 708-74-7F

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in electrochem. reduction of methotrexate)

RN 708-74-7 HCAPLUS

CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)



L62 ANSWER 110 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1982:616120 HCAPLUS Full-text

DOCUMENT NUMBER: 97:216120

ORIGINAL REFERENCE NO.: 97:36277a,36280a

TITLE: Reactions of tetraaminopyrimidine with
1-arylsulfonyl-4-methylimidazolin-2-ones

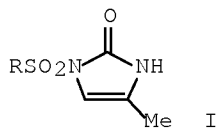
AUTHOR(S): Zav'yalov, S. I.; Zavozin, A. G.

CORPORATE SOURCE: Inst. Org. Khim. im. Zelinskogo, Moscow, USSR

SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1982), (8), 1910-13
CODEN: IASKA6; ISSN: 0002-3353

DOCUMENT TYPE: Journal

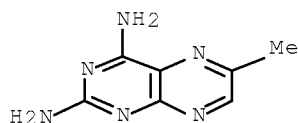
LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 97:216120
 ED Entered STN: 12 May 1984
 GI



AB Cyclocondensation of 2,4,5,6-tetraaminopyrimidine with I (R = 4-MeOC₆H₄, 4-FC₆H₄, 2,5-Cl₂C₆H₃, 2,5-Br₂C₆H₃, 4-BrC₆H₄, 4-O₂NC₆H₄) yields 6-methyl-2,4-diaminopteridine of the aryl group contains an electron donating substituent and 7-methyl-2,4-diaminopteridine when the substituent is an electron-accepting group.

IT 708-74-7P
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in cyclocondensation of (arylsulfonyl)methylimidazolinones with tetraaminopyrimidine)

RN 708-74-7 HCAPLUS
 CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)

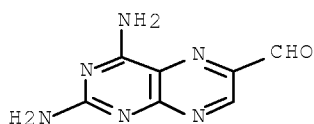


L62 ANSWER 205 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1955:8559 HCAPLUS
 DOCUMENT NUMBER: 49:8559
 ORIGINAL REFERENCE NO.: 49:1825i,1826a-e
 TITLE: 2,4-Diaminopteridine aldehydes
 INVENTOR(S): Petering, Harold G.
 PATENT ASSIGNEE(S): Upjohn Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

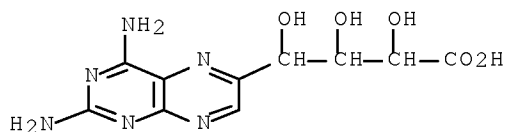
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2667484		19540126	US 1950-175476	19500722 <--

ED Entered STN: 22 Apr 2001

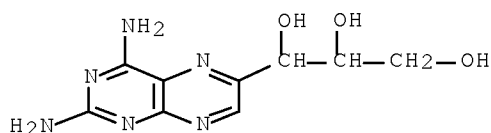
- AB Oxidation with Pb(OAc)₄ or HIO₄ of 2,4-diamino-6 (and 7)-(polyhydroxyalkyl)pteridines gave the corresponding formyl derivs. Thus, to 2,4-diamino-6-(tetrahydroxybutyl)pteridine (I) 1.41 g. and 25% aqueous HOAc 75 ml. was added Pb₃O₄ 10.3 g. portionwise over a period of 0.5 hr., the mixture allowed to stand 20 min. (during which time the temperature rose to 40° and all the Pb₃O₄ had gone into solution), treated with activated C 200 mg., stirred, allowed to stand 15 min., filtered, the filtrate treated with (NH₄)₂SO₄ 6 g. in H₂O 15 ml., the precipitate of PbSO₄ filtered, and the filtrate divided into 2 portions. One portion was extracted twice with Et₂O 250 ml., and the yellow precipitate formed in the cooled aqueous layer collected, washed with EtOH, then Me₂CO and Et₂O, giving 70 mg. 2,4-diamino-6-formylpteridine (II), absorption maximum in 0.1N NaOH at 262 and 370 mμ, min. at 315 mμ. The pH of the 2nd portion adjusted to 5.0 with Na₂CO₃ yielded 65 mg. II which was washed as above. It was possible to isolate by standard procedures 180 mg. II phenylhydrazone from the combined mother liquors of both portions. Also reported are the following derivs. of II (ultraviolet maximum and min. as mμ in parentheses): thiosemicarbazone (265, 340, and 405; 245, 305, and 370); oxime (262, and 382; 342 and 240, point of inflection about 305); also 2,4-diamino-7-formylpteridine (258 and 370; 236 and 310). I was prepared as follows: H₂O 13 ml. and then HOAc 1 ml. and 85% N₂-H₄.H₂O 0.6 ml. were added in that order to a dry mixture of 2,4,5,6-tetraaminopyrimidine-2HCl 1.065 g., NaHCO₃ 0.85 g., and L-sorbose 1.8 g., the pH adjusted from about 7.0 to 5-6 with glacial HOAc (about 0.5 ml.), the mixture heated 2 hrs. on a H₂O bath at 95-100°, cooled 16 hrs. at 5°, and the brown precipitate collected, washed with EtOH, Me₂CO, and Et₂O, and dried, yielding 0.67 g. I; diboric acid complex. Similarly prepared were the following 2,4-diaminopteridines: 6-trihydroxypropyl, 7-tetrahydroxybutyl, maximum in 0.1N NaOH, 235 and 310 mμ, min. 255 and 365 mμ; in 0.1N HCl, maximum at 240, 285, and 335 mμ, and 7-trihydroxypropyl. The aldehydes are valuable as intermediates in the synthesis of folic acid antagonists and related compds. The position of the formyl group was determined by an empirical spectral method. Cf. C.A. 46, 5094h.
- IT 4261-17-0, 6-Pteridinecarboxaldehyde, 2,4-diamino-
(and derivs.)
- RN 4261-17-0 HCAPLUS
- CN 6-Pteridinecarboxaldehyde, 2,4-diamino- (CA INDEX NAME)



- IT 36093-91-1P, 6-Pteridinebutyric acid, 2,4-diamino-
α,β,γ-trihydroxy- 859055-16-6P, Pteridine,
2,4-diamino-6-(1,2,3-trihydroxypropyl)- 883310-60-9P,
1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)-, L-xylo-
911667-16-8P, Pteridine, 2,4-diamino-6-L-xylo-tetrahydroxybutyl-
RL: PREP (Preparation)
(preparation of)
- RN 36093-91-1 HCAPLUS
- CN 6-Pteridinebutanoic acid, 2,4-diamino-α,β,γ-trihydroxy-
(CA INDEX NAME)

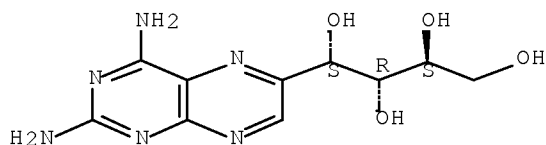


RN 859055-16-6 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED



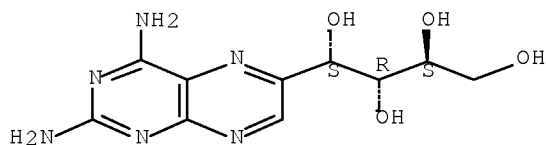
RN 883310-60-9 HCAPLUS
CN 1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)-, L-xylo- (5CI) (CA INDEX NAME)

Relative stereochemistry.



RN 911667-16-8 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.

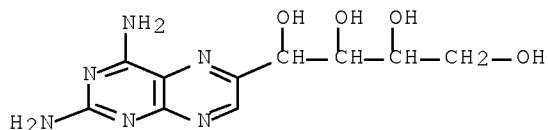


L62 ANSWER 206 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1954:77767 HCAPLUS
DOCUMENT NUMBER: 48:77767
ORIGINAL REFERENCE NO.: 48:13732e-g
TITLE: Isolation of 2,4-diaminopteridines
INVENTOR(S): Schmitt, John A.

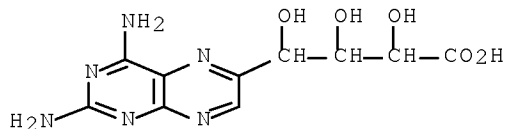
Serial No.:10/584,996

PATENT ASSIGNEE(S): Upjohn Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2647898		19530804	US 1950-175480	19500722 <--
ED	Entered STN: 22 Apr 2001				
AB	The yields in the isolation of 2,4-diaminopteridines from aqueous solns. are greatly increased by the use of boric acid (I) in the presence of sulfate ion. To a dry mixture containing 530 mg. 2,4,5,6-tetraaminopyridine-HCl (II), 900 mg. L-sorbose (III), 680 mg. AcONa.3H ₂ O (IV), and 300 mg. I is added 0.3 ml. of 85% N ₂ H ₄ .3H ₂ O (V) and 0.7 ml. glacial AcOH in 6.5 ml. H ₂ O, the mixture warmed about 2 hrs. at 70°, the small amount of solid filtered off, and the pH adjusted to about 7 with NH ₄ OH, the solution cooled 16 hrs. at about 5°, then warmed to room temperature, treated with 300 mg. I and 660 mg. (NH ₄) ₂ SO ₄ (VI), cooled and the precipitated solid collected, washed with H ₂ O, Me ₂ CO, and ether, and dried at 60° in vacuo to give 430 mg. of the boric acid complex of 2,4-diamino-6-(tetrahydroxybutyl)pteridine (VII). When I is used in the absence of sulfate ion with the same amts. of reactants, only 50 mg. VII is obtained. If I is omitted, no pteridine is isolated.				
IT	36093-90-0P, 1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)- 36093-91-1P, 6-Pteridinebutyric acid, 2,4-diamino- α,β,γ -trihydroxy- 854462-87-6P, 1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)-, compound with boric acid RL: PREP (Preparation) (preparation of)				
RN	36093-90-0 HCAPLUS				
CN	1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)- (CA INDEX NAME)				



RN 36093-91-1 HCAPLUS
 CN 6-Pteridinebutanoic acid, 2,4-diamino- α,β,γ -trihydroxy-
 (CA INDEX NAME)

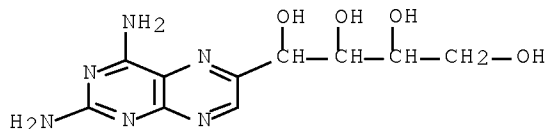


RN 854462-87-6 HCAPLUS
 CN 1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)-, compd. with boric acid
 (5CI) (CA INDEX NAME)

CM 1

CRN 36093-90-0

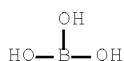
CMF C10 H14 N6 O4



CM 2

CRN 10043-35-3

CMF B H3 O3



L62 ANSWER 207 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1954:60630 HCAPLUS
 DOCUMENT NUMBER: 48:60630
 ORIGINAL REFERENCE NO.: 48:10787e-i
 TITLE: 6-(Phenoxymethyl)pteridines
 INVENTOR(S): Weisblat, David I.; Magerlein, Barney J.
 PATENT ASSIGNEE(S): Upjohn Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2656356		19531020	US 1951-212668	19510224 <--

ED Entered STN: 22 Apr 2001

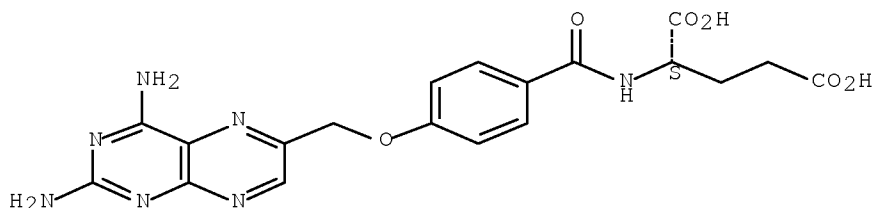
GI For diagram(s), see printed CA Issue.

AB Compds. having the general formula are described where each Z can be H, HO, HS, H2N, halogen, or alkyl, and Y can be H, O2N, H2N, halogen, alkyl, HO, RO, SO3H, CO2H, and esters or amides of the SO3H and CO2H groups. These compds. decompose above 300° and are best characterized by ultraviolet absorption spectra. They are useful as folic acid antagonists and differ in that their action is reversed, usually quantitatively, by administration of more folic acid; they are also useful as antiviral agents and as enzyme inhibitors. Their synthesis is best accomplished by interaction of YC6H4OCH2COCH(OR)2, where Y is as before, in glacial HOAc and an aqueous solution of freshly prepared 4,5-diaminopyrimidine in an inert atmospheric in the dark for 30-120 min. with heating. Thus, 0.8 g. p-(EtO)2CHCOCH2OC6H4CO2Et (preparation given) in 14.8 ml. glacial HOAc was added to a mixture of 0.42 g. NaOAc and 0.55 g.

2,4,5-triamino-6- hydroxypyrimidine-2HCl, the mixture stirred 30 min. at room temperature in the dark under N, heated to 118-20°, stirred 20 min. longer, cooled to 0°, the dark precipitate collected, washed twice with H₂O and once with Me₂CO, and dried gave 0.58 g. Et 4-(2-amino-4-hydroxy-6-pteridyl)methoxybenzoate [2-amino-4-hydroxy-6-(p-carbethoxyphenoxy)methyl]pteridine] (I). I was converted to the free acid exhibiting an ultraviolet absorption spectrum with peaks at 275 and 363 mμ, E1%1cm. 1.114 and 267, resp. Also described are the following compds. in which R = p-(2-amino-4-hydroxy-6-pteridylmethoxy)benzoyl: L-EtO₂CCH(NHR)CH₂CH₂CO₂Et, showing peaks at 258 and 366 mμ, E1%1cm. 642.5 and 177.5, resp.; L-HO₂CCH(NHR)CH₂CH₂CO₂H (oxopterin-G), having peaks at 258 and 364 mμ, E1%1cm. 855 and 185, resp.; and L-HO₂CCH(NHR')CH₂CH₂CO₂H (R' = p-(2,4-diamino-6-pteridylmethoxy)benzoyl), with peaks at 259 and 264 mμ, E1%1cm. of 599 and 166, resp. (in 0.1N NaOH)

IT 57963-55-0P, Glutamic acid, N-[p-[(2,4-diamino-6-pteridyl)methoxy]benzoyl]-, L-
 RL: PREP (Preparation)
 (preparation of)
 RN 57963-55-0 HCAPLUS
 CN L-Glutamic acid, N-[4-[(2,4-diamino-6-pteridiny)l)methoxy]benzoyl]- (CA INDEX NAME)

Absolute stereochemistry.



L62 ANSWER 208 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:41301 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 47:41301

ORIGINAL REFERENCE NO.: 47:6953d-g

TITLE: Cancerocidal substances. I. Effect of pterins on the Yoshidasarcoma

AUTHOR(S): Sakurai, Yoshio; Yoshino, Keishi

SOURCE: Yakugaku Zasshi (1952), 72, 1294-6

CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 22 Apr 2001

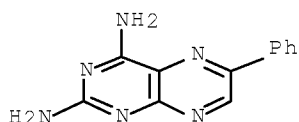
AB p-AcNHC₆H₄Ac is oxidized with SeO₂ to p-AcNHC₆H₄-COCH(OH)₂ (I); I.NaHSO₃ gives a phenylosazone, m. 217°. 2,4,5,6-Tetraaminopyrimidine (1 g.) and 10 g. Na₂SO₃ in 50 ml. water poured into 20 ml. water containing 1 g. NaHSO₃ and 2 g. I.NaHSO₃, let stand overnight, the precipitate (0.45 g.) filtered, taken up in 10% AcOH, the solution filtered, the filtrate adjusted to pH 7, and the precipitate filtered and recrystd., yield 2,4-diamino-6-(p-acetamidophenyl)pteridine (II), which gives a neg. diazo reaction for primary amines. II (1 g.) heated 3 hrs. on a steam bath with 200 ml. 15% HCl, the solution filtered, the filtrate adjusted to pH 7 with NH₄OH, and the precipitate filtered and recrystd., yields the 6-(p-H₂-NC₆H₄) analog of II giving a red, diazo reaction with 2-naphthol. I and 4-hydroxy-2,5,6-

triaminopyrimidine give 2-amino-4-hydroxy-6-phenylpteridine, showing yellow, a green fluorescence in aqueous solution I and 2,4,5,6- tetraaminopyrimidine give 2,4-diamino-6-phenylpteridine, yellow, forming a fluorescent aqueous solution Condensation of 2,4,5,6-tetraaminopyrimidine and glucose in the presence of N₂H₄.H₂O give 2,4-diamino-6-(D-arabo- tetrahydroxybutyl)pteridine, yellow. These as well as 2,4-diamino-4-hydroxy- and 2-amino-4-hydroxypteridine caused severe damage to the nuclei of tumor cells on intraperitoneal injection of 1 mg./kg. rat; other simpler pteridines showed no remarkable effect on animals within the dosage of 10-100 mg./kg.

IT 1026-36-4P, Pteridine, 2,4-diamino-6-phenyl- 883310-61-0P
 , Pteridine, 2,4-diamino-6-D-arabo-tetrahydroxybutyl-
 RL: PREP (Preparation)
 (preparation of)

RN 1026-36-4 HCAPLUS

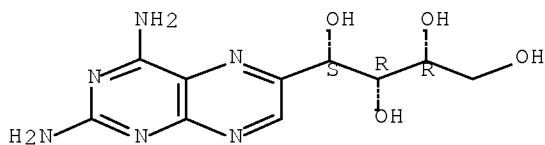
CN 2,4-Pteridinediamine, 6-phenyl- (CA INDEX NAME)



RN 883310-61-0 HCAPLUS

CN 1,2,3,4-Butanetetrol, 1-(2,4-diamino-6-pteridyl)-, D-arabo- (5CI) (CA INDEX NAME)

Relative stereochemistry.



L62 ANSWER 209 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:34974 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 47:34974

ORIGINAL REFERENCE NO.: 47:5947b-d

TITLE: Pteridines. V. The mechanism of the formation of folic acid

AUTHOR(S): Sato, Hideo; Kimura, Ken

CORPORATE SOURCE: Inst. Technol., Tokyo

SOURCE: Nippon Kagaku Zasshi (1951), 72, 953-5

CODEN: NPKZAZ; ISSN: 0369-5387

DOCUMENT TYPE: Journal

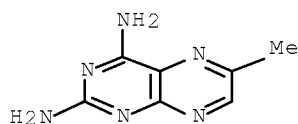
LANGUAGE: Unavailable

ED Entered STN: 22 Apr 2001

AB A crude product in the synthesis of folic acid (I) from 2,4,5-triamino-6-hydroxypyrimidine (II), CH₂BrCHBrCHO (III), and N-(p-aminobenzoyl)-glutamic acid (IV), treated in dilute NaOH, with AcOH to pH 6-7 yielded a yellowish precipitate, 0.2 g. of which, purified twice by dissolving in alkali and precipitating with AcOH at pH 6.5, gave 50 mg. of a compound, C₇H₇ON₅,

identified as 2-amino-4-hydroxy-6-methylpteridine by oxidation to the corresponding 6-carboxylic acid with KMnO_4 . Similarly, a by-product precipitated at pH 4-5.5 in the synthesis with $(\text{CH}_2\text{Br})_2\text{CO}$ instead of III was found to be the 7-Me isomer. III (1 g.) in 50 cc. alc. was added dropwise to 1 g. II and 1 g. IV in 100 cc. H_2O , with the pH maintained at 4.0 by adding AcOH ; after 15 min. the precipitate was collected, repeatedly washed with H_2O and alc. One half of the precipitate (which contained Br) was stirred 8 hrs. with 1 g. IV in 50 cc. H_2O , and another half with 50 cc. H_2O , both at pH 4 to give 46 and 13 mg., resp. These findings indicate that III reacts first with II to give 2,4-diamino-5-(1-formyl-2-bromoethylamino)-6-hydroxypteridine which, in turn, condenses slowly with IV to yield I.

IT 708-74-7P, Pteridine, 2,4-diamino-6-methyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 708-74-7 HCAPLUS
 CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)



L62 ANSWER 210 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:34973 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 47:34973

ORIGINAL REFERENCE NO.: 47:5946i,5947a-b

TITLE: Pteridines. IV. The formation of 6- or 7-isomers of pteridines

AUTHOR(S): Sato, Hideo; Nakajima, Michiaki; Tanaka, Hiroshi

CORPORATE SOURCE: Inst. Technol., Tokyo

SOURCE: Nippon Kagaku Zasshi (1951), 72, 868-70

CODEN: NPKZAZ; ISSN: 0369-5387

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 22 Apr 2001

AB IV (1.41 g.) in 75 cc. H_2O and 1.26 g. AcCHCl_2 in MeOH were refluxed, with the pH kept at 1.6, to yield 250 mg. 2-amino-4-hydroxy-6-methylpteridine (X), identified by oxidizing with KMnO_4 in aqueous alkali to the corresponding acid and comparing its absorption maximum (240 and 310 $\text{m}\mu$) with those of an authentic specimen. At pH 7 the product was 100 mg. of 7-Me isomer (XI) (the absorption maximum of the corresponding acid, 377 $\text{m}\mu$). IV and II gave X at pH 4 and, both X and XI at pH 1.6. IV and $(\text{CH}_2\text{Br})_2\text{CO}$ gave both X and XI at pH 4 and X at pH 1.6. Similarly, I with II at pH 8 gave 2,4-diamino-6-methylpteridine.

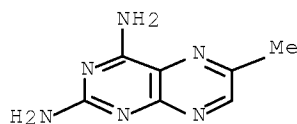
IT 708-74-7P, Pteridine, 2,4-diamino-6-methyl-

RL: PREP (Preparation)

(preparation of)

RN 708-74-7 HCAPLUS

CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)



L62 ANSWER 211 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1953:6363 HCAPLUS Full-text
 DOCUMENT NUMBER: 47:6363
 ORIGINAL REFERENCE NO.: 47:1136e-i,1137a-h
 TITLE: Use of nitro- and halo-ketones in the synthesis of
 pteridines, including pteric acid, from
 2,4,5-triamino-6 hydroxypyrimidine
 AUTHOR(S): King, F. E.; Spensley, P. C.
 CORPORATE SOURCE: Oxford Univ., UK
 SOURCE: Journal of the Chemical Society (1952)
 2144-52
 CODEN: JCSOA9; ISSN: 0368-1769
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 OTHER SOURCE(S): CASREACT 47:6363

ED Entered STN: 22 Apr 2001

AB cf. C.A. 44, 1116a. The bisulfite compound (I) from 2,4,5-triamino-6-hydroxypyrimidine (II) (9 g.) in 35 cc. hot H₂O, treated with 15 cc. concentrated HCl, gives 4.9 g. of the di-HCl salt (III), m. above 300°. I (6 g.) in 25 cc. hot H₂O, treated with 3 g. O₂NCH₂CH:NONa and warmed 30 min. at 50°, gives 61% 2(or 4)-5-diamino-4(or 2)-hydroxy-6-(2-nitroethylideneamino)-pyrimidine (IIIA), with 1 mol. H₂O, orange-brown, m. above 300°; warm 2 N H₂SO₄ gives the sulfate of II; reduction of IIIA gives intractable products, but the sky-blue fluorescence of the dilute alkaline solns. indicates the partial formation of the expected 2-amino-4-hydroxypteridine. 2,4,5,6-Tetraminopyrimidine bisulfite (IV) gives no precipitate with O₂NCH₂CH:NOH. III (0.5 g.) and 1 g. AcONa in 5 cc. H₂O, treated with 0.4 g. BzCH₂NO₂ in 20 cc. warm 50% aqueous EtOH, gives 70% 2,5-diamino-6-hydroxy-4-(2-nitro-1-phenylethylidene-amino)pyrimidine (V), with 1 mol. H₂O, orange, m. above 300°. V (1.1 g.) in 25 cc. boiling 25% EtOH, treated during 1 hr. with 5 g. Na₂S₂O₄ and boiled an addnl. hr., gives 2-amino-4-hydroxy-7-phenylpteridine (VI) (C.A. numbering), with 1 mol. H₂O, buff, m. above 360°. I (2 g.) in 75 cc. hot 50% aqueous EtOH, treated with 1.6 g. BzCH₂NO₂ in 50% EtOH and refluxed 2 hrs., give 26% VI. III (0.9 g.) in 9 cc. H₂O, treated with 1.8 g. AcONa and 0.6 g. BzCHO in 5 cc. 50% aqueous EtOH, gives 97% VI; sulfate, C₁₂H₉ON₅0.5H₂SO₄·H₂O, yellow, m. above 300°; Na salt, with 1 mol. H₂O, yellow, m. above 300°, intense sky-blue fluorescence in H₂O. VI is largely unchanged on heating 15 min. at 200°. VI (5 g.) in 50 cc. 4 N NaOH, heated 20 hrs. at 170°, gives 20% of the Na salt (VII), decomp. about 295°, of 2-amino-6-phenylpyrazine-3-carboxylic acid, pale yellow, m. 225° (decomposition), purple-blue fluorescence; the filtrate from VII, on acidification to pH 2, gives 50% 2-hydroxy-6-phenyl-pyrazine-3-carboxylic acid, buff, m. 208-9° (decomposition); Et ester, pale yellow, m. 112°. VII (0.8 g.) in 12 cc. 80% H₂SO₄, heated 15 min. at 200°, yields 70% 2-amino-6-phenyl-pyrazine, m. 125-6° (cf. Weijlard, et al., C.A. 39, 30012). III and (ClCH₂)₂CO give 53% 2-amino-4-hydroxy-6-methyl-pteridine. III (4.5 g.) in 80 cc. 50% aqueous EtOH, treated with 13.5 g. AcONa and 3.8 g BzCHCl₂ and refluxed 1.5 hrs., gives 60% 2-amino-4-hydroxy-6-phenylpteridine (VIII), with 1 mol. H₂O, deep orange, m. above 360°; sulfate, with 1 mol. H₂O, pale yellow, m. above 360°. VIII (3.1 g.) and 32 cc. 4 N NaOH, heated 24 hrs. at 170°, give 57% 2-hydroxy-5-phenyl-3-pyrazinecarboxylic acid, bright yellow needles or yellow prisms, m. 200°

Serial No.:10/584,996

(decomposition), brilliant pale green fluorescence; Et ester, pale yellow, m. 158-9°. The tri-HCl salt from IV (1 g.), 2.8 g. AcONa, and 0.75 g. BzCHCl₂ in 10 cc. 50% EtOH, refluxed 6 hrs., give the sulfate, with 1 mol. H₂O, yellow, m. above 300°, of 2,4-diamino-6-phenylpteridine, with 0.5 mol. H₂O, m. 285-6°, brilliant light blue-green fluorescence. IV (2 g.) and 13 g. BzCHO in 80 cc. 50% EtOH, refluxed 15 min., give the sulfate, with 1 mol. H₂O, pale yellow, m. above 300°, of 2,4-diamino-7-phenylpteridine, pale yellow, m. 290-1° (decomposition); a pure compound was not obtained from IV or the tri-HCl salt with BzCH₂NO₂ and Na₂S₂O₄. p-H₂NC₆H₄CO₂H and HOCNa:C(NO₂)CHO (IX) in H₂O give an immediate precipitate of p-(3-hydroxy-2-nitroallylideneamino)benzoic acid (X), yellow, m. 234° (decomposition). III (0.17 g.) and 0.4 g. AcONa in 5 cc. H₂O, added to X in hot 50% EtOH and heated to boiling, give 0.16 g. 2,5-diamino-6-hydroxy-4-(3-hydroxy-2-nitroallylideneamino)pyrimidine (XI), orange-yellow, m. 360°; 0.52 g. XI results from 8.6 g. III, 0.8 g. AcONa, and 0.4 g. IX in H₂O. p-H₂NC₆H₄CO₂Et similarly gives the Et ester (XII) of X, yellow, m. 158-9°; 0.88 g. XII and 0.36 g. o-C₆H₄(NH₂)₂ in 20 cc. EtOH, refluxed 1 hr., give 81% 6-nitro-2,3-benzo-1,4-diazepine, deep red, m. 360°, and 61% p-H₂NC₆H₄CO₂Et; the same compound (71%) results from o-C₆H₄(NH₂)₂ and IX. OHCCBrCHBrCO₂H (XIII) (0.65 g.), 1.1 g. III, and 0.7 g. AcONa in H₂O immediately give 0.85 g. 2(or 4),5-diamino-4(or 2)-(2,3-dibromo-3-carboxyallylideneamino)-6-hydroxypyrimidine, bright yellow, m. above 360°. p-H₂NC₆H₄CO₂Et (1.65 g.) and 2.6 g. XIII in 10 cc. EtOH, refluxed 20 min., diluted with 300 cc. H₂O, and refluxed 1 hr. with 0.84 g. NaHCO₃, give 20% Et p-(2-bromo-3-hydroxyallylideneamino)benzoate (XIV), very pale yellow, m. 159-60°; with III this yields a yellow-orange compound (not identified). Cl₂CHCO₂H (34 cc.) and 37 cc. PBr₃, heated 1 hr. at 100° and then to 190°, give 81% dichloroacetyl bromide (XV), b. 125-9°. (ClCH₂)₂CO (20 cc.), gradually treated with 10 cc. Br on the steam bath, gives 67% 3-bromo-1,1-dichloroacetone (XVI), b₂₅ 92-3°, m. 30-1° (semicarbazone, m. 131°); 20 g XV in ether, added (15 min.) to 8.2 g. CH₂N₂ in ether at room temperature, gives 23% XVI. AcCCl₂CO₂Et (75 g.) at 50°, treated dropwise with 20 cc. Br and heated 15 min. at 90°, gives 45% Et γ-bromo-α, α-dichloroacetoacetate (XVII), b₁₁ 127°; XVII also results (43%) by saturating BrCH₂COCH₂CO₂Et with Cl (cooling in H₂O); refluxed with H₂O, XVII gives some XVI. XVI (2.06 g.), 1.82 g. p-H₂NC₆H₄CO₂Et, and 1.26 g. NaHCO₃ in 8 cc. 90% EtOH, shaken 3 days, treated with 2.1 g. III and 5.3 g. AcONa in 40 cc. 50% EtOH, and the precipitate (0.9 g.) treated 2-3 hrs. (N atmospheric) with 40 cc. 2 N NaOH, give 0.4 g. of a gelatinous product having 10% pteric acid (XVIII) activity for Streptococcus faecalis. p-H₂NC₆H₄CO₂H (1 g.), 1.5 g. III, and 6 g. AcOH in 50 cc. EtOH and 150 cc. H₂O, treated with 1.5 g. XVI, give 0.3 g. product with 17% XVIII activity. p-H₂NC₆H₄CO₂H (1 g.) and 1.5 g. III in 100 cc. EtOH and 150 cc. H₂O, treated with 1.5 g. XVI in 50 cc. EtOH, the pH adjusted to 4-4.3 with NaOH and stirred with a stream of N, give (1 hr.) 0.4 g. XVIII (17% activity), 0.35 g. (5 hrs.) (36% activity), and 0.07 g. (36 hrs.) (50% activity); over-all yield 9.9%. III (1.5 g.) and 1.9 g. p-aminobenzoyl-L-glutamic acid in 200 cc. 25% EtOH, treated with 1.5 g. XVI (pH at 3.25-3.55) and stirred with N, give 14% pteroylglutamic acid (0.42 g. after 0.5 hr. with 34% activity and 0.54 g. after 18 hrs. with 57% activity).

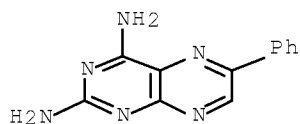
IT 1026-36-4P, Pteridine, 2,4-diamino-6-phenyl-

RL: PREP (Preparation)

(preparation of)

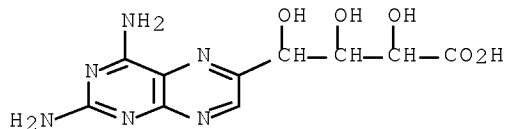
RN 1026-36-4 HCAPLUS

CN 2,4-Pteridinediamine, 6-phenyl- (CA INDEX NAME)



L62 ANSWER 212 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1952:29799 HCAPLUS
 DOCUMENT NUMBER: 46:29799
 ORIGINAL REFERENCE NO.: 46:5094h-i,5095a
 TITLE: 2,4-Diamino-6-(3-carboxy-1,2,3-trihydroxypropyl)pteridine
 INVENTOR(S): Petering, Harold G.; Schmitt, John A.
 PATENT ASSIGNEE(S): Upjohn Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2568462		19510918	US 1950-175478	19500722 <--
ED	Entered STN: 22 Apr 2001				
AB	Condensation in an acid solution (pH 4.5-5.0) of 2,4,5,6-tetraaminopyrimidine (I) and 5-ketogluconic acid (II) in the presence of N ₂ H ₄ (III) by heating on a steam bath yields 2,4-diamino-6-(3-carboxy-1,2,3-trihydroxypropyl)pteridine (IV). E.g., I.HCl 1.065, NaOAc.3H ₂ O 1.36, II 2.36 (as the Ca salt), and boric acid 0.6 g. are treated with glacial HOAc 1.4, 85% III 0.6, and H ₂ O 10 mL., and the resulting solution heated 45 min. at 85-95° (the pH of this solution is 4.5-5.0); the precipitate formed on cooling is washed with H ₂ O twice, and once each with EtOH and Et ₂ O, giving 1.74 g. IV, absorption maximum in 0.1 N NaOH at 257 and 370 mμ, min. at 238 and 322 mμ, E 257 mμ/370 mμ, ratio 3.1. IV is useful as an intermediate, particularly for 2,4-diamino-6-formylpteridine.				
IT	36093-91-1P, 6-Pteridinebutyric acid, 2,4-diamino- α,β,γ-trihydroxy- RL: PREP (Preparation) (preparation of)				
RN	36093-91-1 HCAPLUS				
CN	6-Pteridinebutanoic acid, 2,4-diamino-α,β,γ-trihydroxy- (CA INDEX NAME)				



L62 ANSWER 213 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1952:29798 HCAPLUS
 DOCUMENT NUMBER: 46:29798

Serial No.:10/584,996

ORIGINAL REFERENCE NO.: 46:5094d-h
 TITLE: 2,4-Diaminopteridines
 INVENTOR(S): Seeger, Doris R.
 PATENT ASSIGNEE(S): American Cyanamid Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2568597		19510918	US	<--

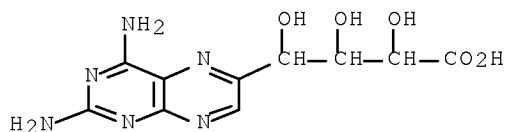
ED Entered STN: 22 Apr 2001

AB 2,4,5,6-Tetraaminopyrimidine (I) with CH₂XCHXCHO and a primary aromatic amine, in H₂O as a solvent, at 0-100° and pH 1.5-6 gives 2,4-diaminopteridines. An unexplained oxidation during the reaction gives rise to the pteridine rather than dehydropterin; better results are obtained when an oxidizing agent of -0.49 to -1.42 v. potential is added. E.g., I sulfate 2.7, and BaCl₂·2H₂O 2.4 are slurried 10 min. with H₂O 60 at 60°, cooled to 45°, p-aminobenzoylglutamic acid 1.33 added, the pH adjusted to 3 with caustic, CH₂BrCHBrCHO 2.2 in HOAc, iodine 1.3, and KI 25 in H₂O 8 added, with the pH kept at 3, the mixture stirred 30 min., the slurry treated after cooling with Hyflo 1, filtered, washed with H₂O and alc., a sample of crude product 2 slurried with lime 4 and H₂O 2000 15 min. at 60-70°, filtered, the filtrate treated with Hyflo and 20% ZnCl₂ solution to pH 10.6, clarified, heated at 80°, more ZnCl₂ solution added to pH 6.8, and the Zn salt filtered with Hyflo; after treatments with lime and then MgCO₃ 1.1 parts N-[p-(2,4- diaminopyrimido[4,5-b]pyrazin-6-ylmethyl-amino)benzoyl] glutamic acid of 74.3% purity is obtained. In 0.1 N NaOH, its UV absorption maximum are at 260, 284, and 370 mμ, and min. at 239, 271, and 333 mμ. Also prepared are N-[p-(2,4-diaminopyrimido[4,5-b]pyrazin-6-yl-methylamino)benzoyl]- γ-glutamyl-γ-glutamylglutamic acid; N-[3,5-dibromo-4-(2,4- diaminopyrimido[4,5-b]pyrazin-6-yl-methylamino)benzoyl]glutamic acid; N-[p-(2,4-diaminopyrimido[4,5-b]pyrazin-6-ylmethylamino)benzoyl]aspartic acid (UV absorption in 0.1 N NaOH, maximum at 260, 282.5, and 370 mμ, min. at 237.5, 270, and 330 mμ; in 0.1 N HCl, maximum at 242.5 and 290 mμ, min. at 235 and 260 mμ); p-(2,4-diaminopyrimido[4,5-b]pyrazin-6- ylmethylamino)benzoic acid; N-(p-aminobenzoyl)alanine, m. 192.5-4° (from 60% alc.); the N-[p-(2,4-diaminopyrimido[4,5-b]-pyrazin-6- ylmethylamino)benzoyl] derivs. of alanine, valine, serine, sarcosine, and ε-aminocaproic acid. These compds. are useful in exptl. medicine as having remarkable antagonistic activity to pteroylglutamic acid. (Cf. C.A. 44, 5401a, and U.S. 2,443,163).

IT 36093-91-1P, 6-Pteridinebutyric acid, 2,4-diamino-
 α,β,γ-trihydroxy-
 RL: PREP (Preparation)
 (preparation of)

RN 36093-91-1 HCAPLUS

CN 6-Pteridinebutanoic acid, 2,4-diamino-α,β,γ-trihydroxy-
 (CA INDEX NAME)



L62 ANSWER 214 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1950:736 HCAPLUS Full-text

DOCUMENT NUMBER: 44:736

ORIGINAL REFERENCE NO.: 44:161c-i,162a-h

TITLE: Analogs of pteroylglutamic acid. III. 4-Amino derivatives

AUTHOR(S): Seeger, Doris R.; Cosulich, Donna B.; Smith, James M., Jr.; Hultquist, Martin E.

SOURCE: Journal of the American Chemical Society (1949), 71, 1753-8

CODEN: JACSAT; ISSN: 0002-7863

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LANGUAGE: Unavailable

ED Entered STN: 22 Apr 2001

AB cf. C.A. 43, 3424a. 2,4,5,6-Tetraminopyrimidine sulfate-2H₂O (I) (27.4 g.), 24.4 g. BaCl₂·2H₂O, and 500 cc. H₂O were heated 10 min. at 60°, cooled to 45°, 13.3 g. N-(p-aminobenzoyl)-L(+)-glutamic acid (II) added, then 5 N NaOH to pH 3, 21.7 g. BrCH₂-CHBrCHO in HOAc, and 12.5 g. iodine and 25 g. KI in H₂O added simultaneously with aqueous NaOH to maintain a pH of 2.8-3.0, the mixture cooled after 20 more min. at 45° and pH 2.8-3.0, and filtered at pH 4 to give 50-60 g. crude N-{p-[(2, 4-diamino-6-pteridylmethyl) amino] benzoyl}glutamic acid ("aminopterin") (III) (method of Waller, C.A. 42, 8200f). III was also prepared from Br₂CHCOCH₂Br, I, and II by the method of H. and Dresbach (U.S. 2, 443, 165, C.A. 42, 7944b). Crude III (50 g.), assaying 9-12% (cf. Hutchings, et al., C.A. 41, 6595e), in 2200 cc. H₂O and 10 cc. 50% NaOH at 80° was treated with 10 g. CaCl₂ in H₂O, the filtrate adjusted to pH 10.7 with aqueous ZnCl₂, clarified, acidified to pH 4, and filtered, the precipitate in 2500 cc. dilute alkali at 80° cooled to 20°, acidified to pH 4, the filtrate acidified to pH 4, the precipitate decolorized with Darco G-60 as the Mg salt dissolved in 2000 cc. H₂O, precipitated at pH 4, and the procedure repeated to give 3.9 g. III of 70-80% purity. Slurrying 3 g. III (79%) with 1.5 g. MgO and 1.5 g. Darco in 150 cc. H₂O at 90°, cooling the filtrate, and crystallizing 4 times from hot H₂O gave yellow needles of C₁₈H₁₈O₅N₈Mg·3H₂O, converted in H₂O at pH 4 to the free acid, C₁₉H₂₀O₅N₈·H₂O. III (0.59 g. 84.7% pure) heated in 20 cc. N NaOH 6 hrs. at 100° under N, cooled, H₂O added, and the pH adjusted to 3 gave 0.395 g. pteroylglutamic acid (IV) (65.5% by bioassay and 70% by ultraviolet spectra). Oxidation of 0.5 g. III in 150 cc. N NaOH with excess KMnO₄ at 90-5° gave 0.177 g. 2-amino-4-hydroxy-6-pteridinecarboxylic acid (V), isolated as from VII below, showing the attachment of the side chain to the pteridine nucleus in the 6-position. Passage of O through 0.59 g. III in 20 cc. N NaOH at 100° 6 hrs. cleaved the CH₂ bridge and on acidification gave 0.235 g. mixture of V and the 6-Me analog (VI), judging from the ultraviolet spectra. I (26 g.), 24 g. BaCl₂·2H₂O, and 700 cc. H₂O were heated 10 min. at 60°, 15 g. p-MeNHC₆H₄CO₂H added at 40° and NaOH to pH 3-4, then, at 40° simultaneously during 30 min., 21.6 g. BrCH₂CHBrCHO in 21.6 cc. HOAc, 12.5 g. iodine, and 25 g. KI in 100 cc. H₂O, and NaOH solution to maintain a pH of 3-4; cooling overnight and filtration with Hyflo-Supercel gave the crude p-[N-(2,4-diamino-6-pteridylmethyl)-N-methylamino]benzoic acid (VII). Heating half of the VII 40 min. at 60° in 1 l. H₂O and 6 g. CaO, chilling the filtrate overnight at pH 3, heating the precipitate 10 min. at 60° in dilute NaOH at pH 11-12, filtration at 20° and pH 7, addition of dilute HCl to pH 3, cooling 16 hrs. at 5°, slurrying the precipitate in 500 cc. H₂O with the min. amount of MgO to give a pH of 8.8-9.3 at 80° in 15 min., heating 15 min. more with 0.5 g. Darco, and chilling the filtrate at pH 3 (dilute HCl) gave VII of 88% purity (ultraviolet spectra). Repetition of the last step twice gave C₁₅H₁₅N₇O₂·2H₂O, m. 254-5° (decomposition). The [N-(diaminopteridylmethyl)-N-methylamino]benzoyl (VIII) analog of III (A-methopterin) was similarly prepared from I and p-

Serial No.:10/584,996

MeNHC6H4CONHCH(CO2H)CH2CO2H as a yellow microcryst. product, 87% pure (ultraviolet spectra), and crystallized from very dilute HCl as C20H22N8O6.H2O, m. 185-204° (decomposition, bath preheated to 160°). No degradation products containing the 2,4-diaminopteridine nucleus were isolated, the 4-NH2 group evidently being readily converted to OH. Thus heating VII in N NaOH at 100° anaerobically 6 hrs. gave the 4-HO analog of 85% purity (ultraviolet spectra). Addition of aqueous KMnO4 to 0.5 g. VII in 166 cc. warm IV NaOH until a green color persisted after 10 min., removal of the color with NaHSO3, cooling of the filtrate at pH 3-4, centrifugation of the precipitate, solution in the min. amount of dilute NaOH, addition of solid NaOH to 5 N concentration, and chilling overnight gave a crystalline Na salt, filtered on Vinyon cloth; decolorization in H2O and addition of dilute HCl to the pale yellow filtrate to pH 3-4 precipitated 185 mg. V of 85% purity. Anaerobic heating of VIII in N NaOH at 100° gave the 4-HO analog of 85% purity (ultraviolet spectra). Addition of 25 cc. com. 30% AcCHO to 27 g. I in 2000 cc. 0.25 N HCl at 40°, then after 30 min., 130 g. of 50% NaOH and chilling gave 62.5% 2,4-diamino-7-methylpteridine (IX). KMnO4 oxidation of IX, as of VIII, acidification with dilute HCl, decolorization of the precipitate in 800 cc. of very dilute NaOH, addition of dilute HCl to pH 3.5-4.0 at 90°, and chilling gave 61% 2-amino-4-hydroxy-7-pteridinecarboxylic acid (X). Solution of 0.5 g. IX in 40 cc. H2O and the min. HCl, dilution to 80 cc. with H2O, addition of 20 cc. 5 N NaOH, then passage of a rapid stream of O at 100° 4 hrs., acidification of the yellow solution, decolorization of the precipitate in dilute NaOH at pH 11-12, and acidification precipitated 0.35 g. 7-Me analog of X. Similar anaerobic conversion was effected in N NaOH and N H2SO4. Heating 2 g. IX in 50 cc. boiling Ac2O, cooling of the red solution, and crystallization from hot EtOH after decolorization gave 0.7 g. 2,4-diacetamido-7-methylpteridine (Xa), m. 236-7°. I (26 g.) and 260 g. Na2SO3 in 900 cc. H2O were heated to 60°, cooled to 30°, and 100 cc. containing 22 cc. of 30% AcCHO and 5 g. NaHSO3 added immediately, and the yellow precipitate filtered after 40 min. at room temperature (70.5% crude yield); purification by stirring 5 g. 30 min. in 10% HOAc gave 0.475 g. insol. IX; decolorization of the yellow filtrate, addition of NH4OH to pH 6.4, and chilling 16 hrs. gave 2.2 g. 2, 4-diamino-6-methylpteridine (XI). KMnO4 oxidation of 0.5 g. XI in 166 cc. of boiling N NaOH, concentration of the filtrate at pH 3, 16 hrs.' chilling, solution of the wet centrifuged precipitate in 5 N NaOH, addition of solid NaOH to 5 N concentration, and chilling gave a crystalline di-Na salt which, decolorized in H2O and pptd with HOAc, yielded 190 mg. V. Heating 500 mg. XI with 25 cc. N NaOH under N 6 hrs. at 100° to complete solution, clarifying, and chilling at pH 4, clarifying the precipitate in the min. amount of dilute NaOH, addition of solid NaOH to 5 N concentration, and chilling gave a crystalline Na salt, which, decolorized in H2O and precipitated with HOAc, yielded 400 mg. VI. Boiling Ac2O and 1 g. XI gave 0.165 g. the 2,4-diacetamido-6-methylpteridine, m. 234.5-6.5°, marked m.p. depression with Xa. For III, the inhibition ratio for half-max, inhibition of the growth of Streptococcus faecalis R. is 1.9, 0.7, and 0.4 at pteroylglutamic acid concns. of 0.003, 0.005, and 0.01 γ/10 cc., resp. Details will be reported elsewhere.

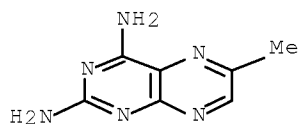
IT 708-74-7P, Pteridine, 2,4-diamino-6-methyl-

RL: PREP (Preparation)

(preparation of)

RN 708-74-7 HCAPLUS

CN 2,4-Pteridinediamine, 6-methyl- (CA INDEX NAME)



L62 ANSWER 215 OF 215 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1947:37525 HCAPLUS Full-text

DOCUMENT NUMBER: 41:37525

ORIGINAL REFERENCE NO.: 41:7438i,7439a-b

TITLE: Growth inhibition of bacteria by synthetic pterins. I. Studies with Streptococcus faecalis, Lactobacillus casei, and Lactobacillus arabinosus

AUTHOR(S): Daniel, Louise J.; Norris, L. C.; Scott, M. L.; Heuser, G. F.

CORPORATE SOURCE: Cornell Univ., Ithaca

SOURCE: Journal of Biological Chemistry (1947), 169, 689-97

CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

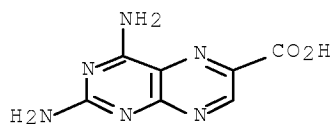
ED Entered STN: 22 Apr 2001

AB The following synthetic pterins were used: 2,4-diamino-6,7- dimethylpyrimido-(4,5-b)pyrazine, 2,4-diamino-7-methylpyrimido(4,5- b)pyrazine, 2,4-diamino-6,7-dicarboxypyrimido(4,5-b)pyrazine, 2,4-diamino-7-carboxypyrimido-(4,5-b)pyrazine, 2,4-diamino-6,7- diphenylpyrimido(4,5-b)pyrazine, 2,4-diaminopyrimido(4,5-b)pyrazine, 2,4-diaminophenanthro(9,10-e)pyrimido(4,5-b)pyrazine, 2,4- diaminoacenaphtho(1,2-e)pyrimido(4,5-b)pyrazine. Certain of these possess high antibacterial activity, not only for S. faecalis and L. casei which require folic acid (I) as an essential nutrient, but also for L. arabinosus, which synthesizes its own I. The substitution of OH for NH2 in the 4- or 2-position destroyed the anti-I activity. Those pterins with 4-NH2 groups varied in anti-I with the nature of the substitution in the 6- and 7- positions.

IT 716-74-5, 6-Pteridinecarboxylic acid, 2,4-diamino- (growth inhibition of bacteria by)

RN 716-74-5 HCAPLUS

CN 6-Pteridinecarboxylic acid, 2,4-diamino- (CA INDEX NAME)



Search History

L1 1 SEA ABB=ON PLU=ON WO2003-EP14970/APPS
 D SCAN
 SEL RN

FILE 'REGISTRY' ENTERED AT 11:09:29 ON 27 DEC 2007

L2 19 SEA ABB=ON PLU=ON (10024-97-2/BI OR 1007-99-4/BI OR 125978-95
 -2/BI OR 22150-76-1/BI OR 23826-47-3/BI OR 3218-02-8/BI OR
 51471-45-5/BI OR 60-12-8/BI OR 6036-64-2/BI OR 724420-15-9/BI
 OR 736919-00-9/BI OR 81827-31-8/BI OR 858127-54-5/BI OR
 858127-56-7/BI OR 858127-57-8/BI OR 858127-58-9/BI OR 858127-59
 -0/BI OR 858127-60-3/BI OR 858127-61-4/BI)

L3 STRUCTURE UPLOADED
 D

L4 50 SEA SSS SAM L3
L5 3639 SEA SSS FUL L3

FILE 'HCAPLUS' ENTERED AT 11:12:21 ON 27 DEC 2007

L6 17909 SEA ABB=ON PLU=ON L5

FILE 'REGISTRY' ENTERED AT 11:53:15 ON 27 DEC 2007

L7 STRUCTURE UPLOADED
L8 50 SEA SUB=L5 SSS SAM L7

FILE 'REGISTRY' ENTERED AT 12:08:17 ON 27 DEC 2007

L9 STRUCTURE UPLOADED
L10 50 SEA SUB=L5 SSS SAM L9

FILE 'REGISTRY' ENTERED AT 12:15:05 ON 27 DEC 2007

L11 STRUCTURE UPLOADED
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L13 2708 SEA SUB=L5 SSS FUL L11

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FILE 'REGISTRY' ENTERED AT 14:12:21 ON 27 DEC 2007

L15 STRUCTURE UPLOADED
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FILE 'REGISTRY' ENTERED AT 14:16:43 ON 27 DEC 2007

L17 11830 SEA ABB=ON PLU=ON 591.385.57/RID
L18 4 SEA ABB=ON PLU=ON L17 AND L2

ENTERED AT 14:29:57 ON 27 DEC 2007

FILE 'REGISTRY' ENTERED AT 14:37:31 ON 27 DEC 2007

L19 STRUCTURE UPLOADED
L20 50 SEA SUB=L5 SSS SAM L19

FILE 'REGISTRY' ENTERED AT 14:51:09 ON 27 DEC 2007

L21 STRUCTURE UPLOADED
L22 50 SEA SUB=L5 SSS SAM L21
L23 2697 SEA SSS FUL L21
L24 1 SEA ABB=ON PLU=ON L23 AND L2

Serial No.:10/584,996

FILE 'HCAPLUS' ENTERED AT 14:53:43 ON 27 DEC 2007
L25 16439 SEA ABB=ON PLU=ON L23

FILE 'REGISTRY' ENTERED AT 15:02:26 ON 27 DEC 2007
L26 STRUCTURE UPLOADED
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L27 50 SEA SUB=L5 SSS SAM L26

FILE 'STNGUIDE' ENTERED AT 15:03:21 ON 27 DEC 2007

FILE 'REGISTRY' ENTERED AT 15:07:27 ON 27 DEC 2007
L28 STRUCTURE UPLOADED
L29 50 SEA SUB=L5 SSS SAM L28

FILE 'STNGUIDE' ENTERED AT 15:08:09 ON 27 DEC 2007

FILE 'REGISTRY' ENTERED AT 15:10:46 ON 27 DEC 2007
L30 STRUCTURE UPLOADED
L31 50 SEA SUB=L5 SSS SAM L30

FILE 'REGISTRY' ENTERED AT 15:22:42 ON 27 DEC 2007
L32 STRUCTURE UPLOADED
L33 8 SEA SUB=L5 SSS SAM L32

L34 184 SEA SUB=L5 SSS FUL L32
L35 2 SEA ABB=ON PLU=ON L34 AND L2

FILE 'HCAPLUS' ENTERED AT 15:24:46 ON 27 DEC 2007
L36 252 SEA ABB=ON PLU=ON L34
L37 220 SEA ABB=ON PLU=ON L36 AND (PRY<=2003 OR AY<=2003 OR PY<=2003)

L38 4 SEA ABB=ON PLU=ON DOBLHOFFER R?/AU
L39 56 SEA ABB=ON PLU=ON TEGTMEIER F?/AU
L40 57 SEA ABB=ON PLU=ON (L38 OR L39)
L41 3 SEA ABB=ON PLU=ON L40 AND L37

FILE 'STNGUIDE' ENTERED AT 15:26:36 ON 27 DEC 2007

FILE 'REGISTRY' ENTERED AT 15:30:09 ON 27 DEC 2007
L42 STRUCTURE UPLOADED
L43 0 SEA SUB=L5 SSS SAM L42
L44 0 SEA SSS SAM L42
L45 7 SEA SUB=L5 SSS FUL L42

FILE 'HCAPLUS' ENTERED AT 15:31:12 ON 27 DEC 2007
L46 9 SEA ABB=ON PLU=ON L45
L47 7 SEA ABB=ON PLU=ON L46 AND (PRY<=2003 OR AY<=2003 OR PY<=2003)

L48 2 SEA ABB=ON PLU=ON L40 AND L47

FILE 'WPIX' ENTERED AT 15:32:29 ON 27 DEC 2007
L49 0 SEA SSS SAM L42
L50 1 SEA SSS FUL L42
L51 2 SEA ABB=ON PLU=ON L50/DCR
L52 0 SEA ABB=ON PLU=ON L40 AND L51

FILE 'BEILSTEIN' ENTERED AT 15:33:24 ON 27 DEC 2007
L53 3 SEA ABB=ON PLU=ON L45
L54 0 SEA ABB=ON PLU=ON L53 AND BABSAN/FA

Serial No.:10/584,996

FILE 'MARPAT' ENTERED AT 15:34:31 ON 27 DEC 2007
L55 1 SEA SSS SAM L42
L56 13 SEA SSS FUL L42
L57 13 SEA ABB=ON PLU=ON L56/COM

FILE 'HCAPLUS' ENTERED AT 15:36:00 ON 27 DEC 2007
L58 3 DUP REM L52 L41 L48 (2 DUPLICATES REMOVED)

FILE 'HCAPLUS' ENTERED AT 15:36:21 ON 27 DEC 2007
D QUE L47
L59 5 SEA ABB=ON PLU=ON L47 NOT (L41 OR L48)

FILE 'WPIX' ENTERED AT 15:36:48 ON 27 DEC 2007
D QUE L51
L60 2 SEA ABB=ON PLU=ON L51 NOT L52

FILE 'HCAPLUS, WPIX, BEILSTEIN, MARPAT' ENTERED AT 15:37:44 ON 27 DEC 2007
L61 20 DUP REM L59 L60 L53 L57 (3 DUPLICATES REMOVED)

FILE 'HCAPLUS' ENTERED AT 15:40:03 ON 27 DEC 2007
D QUE L37
L62 215 SEA ABB=ON PLU=ON L37 NOT (L41 OR L48 OR L47)